

Peter Waller

Interviewed by

Ian Symonds

3rd May 2019

At the

BCS London Office,

5 Southampton Street, London, WC2E 7HA

Kindly provided by BCS - The Chartered Institute for IT

Copyright **Archives of IT**

(Registered Charity 1164198)

Welcome to the Archives of Information Technology. It's the 3rd of May 2019, and we're in the offices of the British Computer Society in London. I am Ian Symonds, and I have been working in information technology and management consultancy since 1976, a period of enormous change in the industry.

[00:19]

Today I'm talking to Peter Waller. Peter's early career was in sales, marketing and senior management at IBM and Hitachi Data Systems. In more recent years he has had a broad range of board level and advisory roles in smaller companies, often with an IT focus. We'll be talking about Peter's background influences, and some key events that shaped his career, and getting his views on the industry today. So Peter, where and when were you born?

I was born in Ewell in Surrey, in 1946, and, lived there whilst I was going through my primary and secondary education.

And, what did your parents do?

My father worked for British Rail. He ended up running a directory service out of Waterloo station. Technology has changed a lot these days, but in those days you rang up basically to ask for train times, and there was a large kludge of 30 or 40 people there, sitting around answering calls. And he used to run that office. And he has a background in, as his family did, in the rail industry. My mother was a housewife. My eldest sister was born before the war, and, myself and a younger sister were born after the war. So, my mother was, was a housewife for all the time I ever knew her.

And what was your family life like?

It was, it was very even, very, very good in many ways. My father unfortunately died when I was nine years old, and that obviously made a considerable difference. So, I would spend a lot of time with, with boys of my own age at that stage, with the absence of a father. However, my, my life with my mother and my two sisters was extremely cordial.

And what do you think were the important influences on you at this time? Obviously apart from the death of your father.

Well I think it was a stable home life. And, I think the principal influences were really friends of mine, and colleagues. A particularly big influence was the school that I went to. I went to a grammar school, Tiffin School in Kingston, which academically was very good, but also sporting, it was very good. And I made a lot of friends there, who are still good friends today. And, I think the, the major factor was, I guess, like a lot of school boys at that age, I was good at sport, and if you were good at sport, you tended to fit, fit in. And, therefore, I found it a, you know, an outstanding environment for me, and I guess, the fact that I was happy there, also meant that I did study reasonably hard, which obviously is sort of, important in moving on in life.

Mhm.

So, I would say that that school, the masters at that school, people I met at that school, were probably the, the biggest factor in my life at that stage.

[03:54]

OK. And, what subjects did you study, or did you excel in, when you were at school?

I'm not sure I excelled in anything, to be frank. Most of my time was spent playing sport. I ended up captaining the school at cricket and at rugby. And actually I played an awful lot of chess as well. I played chess for what was a very strong school team, which won many, many leagues and cups. And I also played chess for Surrey, at the under-eighteen level, as well. So that took a fair amount of my time. I, I was a reasonable student. I got nine O Levels, and a couple of A Levels, in geography and history. And I went on to take a scholarship to Cambridge, for history. I didn't get the scholarship but I obviously did well enough that they offered me a place. So... So, that was obviously, I would say, you know, I was, I was a reasonable student.

So... And obviously history was what interested you at the time, or...?

Yes, I think it like in many things in, when you're at school, I found the teaching was good. The same was true of geography, and I think I ended up doing those subjects mainly because I rather liked the, the people who were teaching. I found they were good, you could relate to them, and it sort of worked. So... And history, it's strange because history did interest me at the time, but I can say with all frankness that since I left university, until about five years ago I don't think I ever read anything that related to history.

Mm.

Strangely enough, now that I've got a little bit more time on my hands, I have reverted back to, to reading quite a few books that relate back to history over the ages, and find it very interesting. I think I did it at school, and I did it at university, basically because I was quite good at it. I'm not sure that it inter- You know, I, I just found it something that I could do, and if I'm brutally frank, I didn't have to put too much time and effort and energy into it either; it sort of worked.

[laughs] Left you more time for the sport.

Yes, I think that's true both at school and at university.

And what was the relationship, what sort of relationship did you have with your teachers and, at school?

They were... It was a good relationship. I mean, the teachers varied enormously. There were some who, you know, remembering that at that stage I was eleven to eighteen, seventeen, eighteen, so you tended... You know, you found a lot of teachers were in their forties, fifties, sixties, but there were a number of quite young teachers in their mid-twenties and late twenties as well. And, we developed a good rapport. And some of those would play rugby in the same sort of teams that I would play with as well. When I left college, I came back and played for my old Tiffinians Rugby Club, and some of the teachers would be playing there as well. So, I think the rapport with the teachers was, was, you know, unusually, quite good. Unusually good. The rapport with fellow students was, was very high, and, again, today, a lot of

my friends are people that, as I said earlier, I was at school with. So, so we go back quite a long way.

Mm, that's quite unusual isn't it.

Yeah, I think... I think you tend to find your friends in different areas. Very few people I was at university with I remain in contact with, simply from a geographical point of view, people disperse all over the country. Whereas at school, there's a large, particularly in a London area, because a lot of people come back to London, you do tend to find there's a lot of people living nearby that, that you've known over the years.

[08:07]

And were there any particular events that shaped you during your education?

Ooh. [pause] I don't think I can really pick one out. I don't think... I don't think there's a particular event that shaped, that shaped me at all. [pause] No, I, I'd have to pass on that question.

[08:40]

OK. And, were there any particular lessons that you learnt from your education that you would attribute to your later success, or contributing to your later success?

[pause] Well I think, as a school, it was extremely well run by a gentleman called Brigadier J J Harper, who, as you can imagine, had a certain military style about him. So I mean we, we learnt to, you know, arrive on time, we learnt to be polite, we learnt to do, dress well. We learnt to, you know, do as one is told to some extent. And I think when you go into the world of work, you know, there some sort of obviously basic things, which have got nothing to do with IT, that, you know, stand you in reasonable, reasonably good stead. I think also, you know, the teacher was good, and, probably, you know, gave me a, gave me a sound knowledge, and an all-round knowledge of quite a lot of things that, again, stand you in reasonably good stead. But, I wouldn't say that, again, coming back to the point about a particular thing, there

wasn't a particular incident or a particular person I think that, that... It was just, the ethos of the place, it was, you know, it just, it taught you a fair amount about life.

And does the same apply to your time at university? You went to St Catharine's College at Cambridge.

Yes, very much so. I mean I had three enjoyable student years there. And again, the camaraderie was, was high. A lot of, you know, casual, I used to play a lot of bridge, and, you know, with people, friendly, go out for, usually curries or something, fairly cheap that students could afford. And generally, we had an excellent life with a lot of sport running through it as well. History was not one of those subjects. I mean we, we were always, you know, we were always admired in some ways by some of our colleagues who did medicine or engineering where they would spend sort of eight hours a day in labs and lectures; whereas we tended to have about, four hours a week of lectures, and one meeting with our tutor. And our responsibility over the week would be to write an essay or two. So, it wasn't... You know, it was regarded as, I won't say an easy option, but, you had to structure it yourself, and certainly in my case, again, being quite frank, I didn't do, I did the basic work and not a lot more, for two out of the three terms. And then when you feel the examinations are coming up on you in, in May, I used to spend the whole of my Easter break, three or four weeks of it, actually staying at college and working in the library there, I won't say catching up, but, you know, probably, doing a bit more work than I had done for most of the rest of the year, in order to make sure that, you know, you could in the end pass your exams.

[12:14]

Did computing feature at all in your education, either at school or university?

Not at all. I mean, remember, we're talking here a period of, the late Fifties, going through to '68, and, computing was, was, well, in a commercial way, was in its infancy at that time. I mean, we didn't use computers obviously, we were still in the slide rule days, and, and it didn't feature, it didn't feature at all. The reason that I got into computing was that, as one does, looking around for a job, I wanted to alight on something that would keep me going for 40 years or so. So it struck me that, you

know, some of the bigger companies like Shell and BP in the oil industry, and IBM, and also ICL, in the, in the computing sector, which were the, probably the two bigger players at that time, were the sort of people I applied to for jobs. And I was fortunate, and I was offered a number of jobs, and I selected IBM. And, I, I think I got it right, basically, I'm pleased to say. But no, I had no computing knowledge whatsoever. [13:40]

And those were the days when in fact what IBM was doing, taking graduates, they would them from any discipline, if they felt they had the right basic qualities, and then, they put you through an eighteen-month training course, which was part on the job, part in the classroom, where you learnt the basics in those days of programming, probably in languages which are almost long dead, like assembler and FORTRAN and COBOL, and then also, in terms of systems design...

It's interesting you did all of that stuff, yes.

Yes, I mean, all of that was... Because...

Because of your degree in, because you had a degree in history, were you almost sort of, was a career in management in IBM almost where you were destined if you like?

Oh, I don't know about that. No, I think it, it... I mean, when you came in from university, you tended to come in as what were then called systems engineers. Basically, you were a sort of, field support role. The people who came in to sales, on the whole tended to be somewhat older, and had probably come in, maybe they had been in the military, or they had done something else, but they tended to be in their late twenties or something. It was just, the way, the way they looked at the world at that stage. And so, I think, when you, you go into that environment... I mean, again, we've got to remember the era. I mean when I started, it was just after the launch of a, a series called the 360, and before that, a lot of the computers, and many of those which we took out when we put IBM computers in, basically were driven by valves, you know. And it was, even when I started, everything was put in through punch cards in IBM, paper tape I think in some of the other larger companies, like NCR and ICL at that stage, with great reams of rooms of girls who would be punching cards up, you know, in great pools. I mean literally 50, 100, 100 girls would be there, sort of,

ladies, you know, punching out cards. And you put your programs in on cards and things like that. But that was a big step forward. As I said, a lot of the machines I saw, which we were taking out to replace with, with new updated technology from, from IBM, were valve machines, and even one or two of the old IBM machines, people actually plugged them. Programming was plugging them, rather like you see these old telephone exchanges where people are plugging the wires in. So, you know, you just, almost can't imagine today, of a young person today, who's using their mobile phone, you know, would have no idea just how backward it would look, you know, 60 years ago, 50 years ago.

[16:50]

So, you mentioned just now that you received what I assume was sort of, an excellent sort of, induction training at IBM when you joined them. Tell us a little bit about that. What sort of things did they teach you?

Well, as I said earlier, they, it's an eighteen... It was, it was roughly an eighteenmonth training period when you came in as a trainee, and during that period you would spend something like six weeks, say, on courses, where you would learn to, as I said, program the computers, and learn more about how they ran, and some of the technology behind it, and also how to design computer systems, and how to implement them. So, you would do that. And then, you would be based in a branch office, in my case I was based in Croydon, and you would then go out with the sales staff to clients, or prospective clients, and you would help them install machines, or put programs onto those machines. I mean basically, we were, sort of, one day or one week ahead of the customers in our knowledge. It was literally like that. I mean people would throw you a textbook on how to program in COBOL, you know, on your way out to see the customer, OK, and, you know, you could answer some of the questions, some you couldn't, and you'd come away, and you'd get answers to those, and you'd go back. So, it was a, it was a mixture, as I say, of, of classwork, courses, and then physically going out and meeting with customers, helping them, install the systems and the software that ran on, on their systems.

[18:46]

I mean in those days computers were very expensive, relatively, but it was all the hardware. What you paid for was actually the machinery. In those days IBM gave

away the software, and it gave away, you know, the support. So you were part of a package, but that package was paid for by the cost of the machinery and not by the cost of the software or the cost of the support services. So, for, as an example, I worked with a company called CAV, which were part of the Lucas Group, and for about eight weeks I wouldn't be going into my office, or into, into any of the IBM locations; I would be going to, to CAV. You know, I'd be there from 8.30 or nine o'clock till 5.30 or six o'clock, or, or longer, if we were falling behind, basically helping them design how to transfer their stock systems or their financial systems from the old computer onto, onto IBM's technology, and would spend, as I say, literally a whole period doing that, before then coming back and maybe going on another course, or, or whatever. So... And it was very varied as well, because, I remember I... There was a big company called Molins that used to make, they were down in Deptford, in south-east London, and they used to make cigarette rolling machines, huge great things. And some of the things we worked on there were actually, using computer technology to create these machines, which again was vastly different, and if I'm honest, I never really quite got the hang of it, but, we had a brilliant, a Dr Ian Nussey, who seemed to know everything about it, and, we were young lads who basically were, were programming, programming these numericallycontrolled machines to, to cut pieces of metal to go into the end product. So it was very varied, and very interesting.

[21:00]

And at this stage then, was there still the option open to you to go into more, a more sort of technical career route, programming or, you know, analysis, design, all that sort of thing, or, sales, marketing, management? Did it...

Yes. Most...

At that stage, you hadn't yet made that decision?

Well, I had always wanted to go into sales, but, as I say, they really, they didn't take you initially, straight from university, to go into sales. The vast majority of the people that I started with – not the vast majority, a fair number of people I started with, stayed in what you could call a technical support route. And indeed in some people's

cases they moved to other parts of the company, and went into an even deeper, if you like, technical area of the business. And a number, of whom I'm one, were very keen to get into sales. Really, the salesman in IBM in those days were, were looked up to, you know, as, I won't say the most important people in there, but, but they were, they were pretty important people. And, and to be frank, you could earn quite a lot of money as well, which was always an attraction. So quite a few people would transfer from being a systems engineer into a sales role. I chose to do it very early, and, I was given the opportunity to do it very early as well, after about, two and a half years. So, a year and a half of training and another year or so, and then I moved across into, into sales. And... Which is what I wanted to do, and which I, I found very rewarding. It, it's not selling, it's not sales in the sense that some people know sales, you know, selling shoes or something like that; it's clearly a complex, it was in those days, a complex business, and you had to understand the product, and you had to understand the competition, and, you know, you had to create a large degree of empathy and feeling with, with the prospective clients or with the customers that you were looking after. Because about 80 per cent of what you did was with existing clients, and maybe 20 per cent in my case was with new clients. So, you know, the establishment of a good relationship. And in those days IBM would be talking at quite senior levels within these companies. I mean, you would, you would definitely be dealing with a, you know, the head of IT, and, probably the finance director. Because in those days, IT tended to report in to the finance function within the company, or indeed to the MD, chief executive. Because, clearly, a) they were spending a lot of money, and b) it was quite important for their business, as they became more and more automated. So, so it was... You know, and I enjoyed it thoroughly. And, we had a great team of people, and, we were fortunately very successful as well. So, all things considered, it was a wise move on my part, and, clearly the right thing to do.

[24:19]

And what about your managers, what, tell us a little bit about them, what influence they had over your early career?

Well obviously, there are many functions within a company as big as IBM. The part I saw was mainly the, what you would call the, the fieldwork. So, you'd have a headquarters, and then, in those days we probably had something like fifteen branches

all round the company, all round the country. So really the people that I had most to do with would be the, the managers within those branches, and the branch manager was a, was a, a key position within IBM. And the background of those branch managers was, nearly all of them came through sales. So there was a logical step where people from sales then eventually ended up as a sales manager, and in some cases then ended up as a branch manager, or, then a regional manager, and then ultimately, the head of sales, sales director, for, for the organisation. The great thing about it was, and this is one of the reasons why I chose to go to IBM in the first place, was that they were relatively young, so you'd got people who had got a lot of responsibility, and who were probably in their late twenties at that time. I mean this was a very very youthful industry, you know, in, in the Seventies, which I'm really talking about here, late Sixties, Seventies. I mean most of the people I worked with, I think, you know, had an average age of about, 26 or something like that. Then interestingly, over about ten years, because the great bulk of people were brought in in the late Sixties and early Seventies, that sort of shifted up over ten years to the average age being probably almost 36, because the amount of recruits that came in later were, were probably, not, not as many. It was a huge increase in, in staff in the sort of mid-Sixties through to the early Seventies.

[26:28]

Mm. And how did your career development work? I mean, did you have a lot of control over it?

No.

I guess, this was before the days... Well, I was thinking, this was before the days of, sort of, appraisal systems and so on as well wasn't it?

No no. These were, these were appraisal systems.

You did have them?

They were very, yes, they were very formal appraisal systems. You had your annual appraisal, which, you'd have your monthly meeting with your manager, at which you

would discuss, you know, business issues, but you'd also discuss, you know, performance as well. So, again, the management, I think the, the systems of management were very, were very good, very strong.

[27:13]

The influence you have over your own career depended, was really, it was down to you. If you were, if you were doing a good job, then, you moved on faster. I know that sort of sounds straightforward, but, again, many industries at that time, I mean it was, it was a question of how long you were in the job before you got the move. Whereas in, certainly in my experience in IBM, and I think generally in that industry, it was, if you, if you do a very good job, and they could see that you can do the next job, then because, again, most companies were growing, there was an opportunity to move on quite quickly.

Mhm.

So... The only other thing of course, you know, IBM stood for many things, but one of them, internally we always said, was, I've been moved, and, there were a number of things that would happen. And I in fact was offered, if that's the right word, a move from Croydon, and remember I have always lived in the south, to Birmingham. And it struck me as something I wasn't too sure I wanted to do. But, basically, you don't turn down, you didn't turn down opportunities, otherwise you wouldn't get them. So, in fact, after a couple of years selling in Croydon, I moved up to Birmingham, to take a job up there, initially as a salesman but then, moved up to be what was called in those days an account manager. So, you basically, probably had salesmen working for you. Because you were dealing with big organisations, in my case, the main client I had was the then British Leyland, which of course encompassed plants all over the country, but with a nucleus based in the Midlands, the Midlands area. And I had a couple of salesmen working for, three or four salesmen working for me, and we had about eight or ten systems engineers, and at times we had 20, who would essentially be dotted line working for me, although they had their, they had their own career path, and they had a technical support manager as well. But they would all be working in different parts of British Leyland, which by that time would be spending millions each year on IBM technology. So, so it was really in your

hands. I think if you're, if you were good enough, the opportunities were there for you.

[29:59]

And, you were good enough to become the youngest branch manager in IBM at the time.

At the time I was, yes. We, I worked for a while in Birmingham, and then actually I got... Sir Eddie Nixon, who was then the Chief Executive of IBM, he also had links with the Manchester Business School, and they used to run a short course up there, it was three months, you know, a sort of, mini-MBA if you want to put it that way, but... And it was for people who were in, in industry. And, I guess he, he said that they would send someone from IBM. And so they picked me out and sent me up there. So I spend three months, when I left Birmingham I spent three months in the Manchester Business School, prior to coming back, and then being made branch manager in Yorkshire. So, you know, one moves, as I said, moves around a little bit. So I, up I went to Leeds, and, was based up there for three and a half years. And at the time, I'm trying to think how old I was at the time actually, I think I was probably about 29 or so when I, when I got that job, and, I think, I was certainly the youngest of the branch managers at that stage.

Mhm.

So, I, I had had quite, quite a, a fast rise at, at that point.

[31:30]

And then you later moved on to, well you went to IBM Europe. Was that a different organisation, or...?

You, you remain essentially part of IBM UK, but you get seconded to the European headquarters. So I was seconded there for, a three-year assignment. Which was very interesting. Firstly, you, those were the days when they did sort of pay you overseas allowances, so again, you were, you were able to take advantage of being out and about in Paris. And you had your family, I had a young son at that stage, and so,

family lived in a very nice apartment in the centre of Paris. My job was to liaise between the headquarters and the country operations around Europe. So I would spend much of my time in aeroplanes, and I would be flying off to places like, Germany, Italy, Scandinavia, France, were probably the main places that I went to. And it was very interesting to see how these operations all worked. I mean the culture of doing business in Germany is extremely different to the culture of doing business in Italy, as an example. I mean I love them both.

In what way?

Well, the Germans are very structured. They are very, a little bit dogmatic. If they think you're wrong, they'll argue with you, and, they'll keep arguing until in the end they either get their way or they're basically told that that's how it's going to be, in which case they immediately say, 'Fine.' You know, we've had our debate. Now we'll get on with it. In Italy, you go to Italy, and, you go there, and you, you want them to do something, and they say, 'Yes.' And then you come back about three weeks later, and you find that what you thought they were going to do, wasn't quite what happened. Somehow, it had been sort of, reinterpreted as the way they wanted to do it in the first place. But, they almost always would say yes, and then, manipulate it. So, you don't have long, in most cases, not in all cases, you don't have very long debates with, with them, in the same way that you perhaps had with, with Germans, and some of the northern European.

And to what extent were these differences in culture tempered by a sort of common IBM culture? Did IBM try and sort of, impose that across...?

Significantly. You know, there is no doubt that there was a, a common IBM brand, I think across the world, because I also spent some time in the US, on, you know, six weeks here and a few weeks there sort of thing, in, in California, on two or three occasions, and, you know, there was something about an IBMer from the US, the UK, Germany, Italy, Spain, thought in a common way, you know, that, you, you were, you were brought up through the training programmes, you were brought up with the same standards, the same general approach. So, so all these differences were slightly, were significantly tempered actually. And there's no doubt that, you know, you could go

into any of these geographical domains and there would, there would be a common understanding straight away of, of, you know, what you were saying. It didn't mean, as I said, they got implemented in the same ways, but, there was a clear and common understanding, and everybody understood the structure, and everybody understood the way things worked. And it was truly universal. And it was a huge... It's, it's very interesting. It was a huge strength of the business. Although, I think it was also something of a weakness in the end, because IBM had significant development up until the sort of mid to late Eighties, but, but everybody really did sort of think the same, and, from the beginning through to the mid, late Eighties, everybody up to the president, you know, in the US, were all IBM people, they had come up through the IBM ranks. And IBM began to get itself into a little bit of difficulty around the mid-Eighties. Basically I think it lost touch a little bit with its clients. Because there was an IBM way of doing it. You didn't discount, you didn't change anything, you did it, and, the customers for years had basically gone along with it. But more and more they were saying, 'Well actually, you know, we've got so much tied up with you now, we want, we want some changes. You know, we want some advantages, we want, you know, we want better rates. We want more of this, less of that. And, IBM was a little bit inflexible, I think, and, actually, they, in the end they brought in at the top people from outside. And, I think in many ways that helped it to change the culture, which probably needed changing at that point in time. But there's no doubt that in the period, you know, I was with IBM in the, in the Seventies, early Eighties, mid-Eighties, there's no doubt that, it was a very very strong culture.

[37:08]

And there were other competitive pressures as well at this time weren't there. I mean in particular there were other companies producing, they started to produce IBM compatible mainframes.

Yes.

Who were, presumably, champing at your heels, and...?

Yes. I mean that... These were the Japanese vendors, basically. I mean IBM, when I joined, was in competition with a range of organisations, like UNIVAC, NCR, ICL in

the UK, Digital. But it, it ended up, that period, through that period, as basically considerably bigger than any of those. It dominated the industry. But then what happened was that the Japanese started producing compatible technology. So it was a reverse engineering I guess of IBM's technology and products to some extent. And in particular, Fujitsu and Hitachi, which were two great, big conglomerates in Japan, had the financial wherewithal and the engineering capability to begin to produce products that directly competed with IBM. In fact interestingly, in my last six months in Paris, I was part of the taskforce that worked directly for the then president of IBM Europe, looking at what IBM had to do to stop the Japanese competitors from beginning to take a meaningful amount of share of its market. And, we came up with a, a range of ideas and things, some of which were implemented, some probably weren't. Because I moved on at that stage to come back to the UK to run another branch operation in the Midlands. But, the one thing that, looking into all of this, that I understood, was that the technology that was coming out of Japan was actually very good. What they weren't really able to do at the time though was, they didn't really have the partners on the ground with the sales and technical support skills at the same level as IBM. Plus of course, they were new into the game, and they had to create the awareness in the market. But there was no doubt that from a technical point of view, the product qualities were extremely good. And that became a factor later down the line, and one reason why I ended up joining Hitachi. Because at least I had some understanding...

Somewhat ironic.

Somewhat ironic. Maybe, yes. Yes.

Yes. We'll come to that in a moment.

Sure.

[40:00]

I mean, the... So the broad conclusion was that, presumably, with IBM, was that, your strength was in the sort of, services associated, was I, with putting in large mainframe systems perhaps, rather than the, rather than the technology itself?

Oh yeah. I, I mean my... I am not a technical person, even today, I'm trumped by my children, and, I'm beginning to be trumped by my seven-year-old granddaughter, in terms of the use of modern technology. I'm sure she can do more on her phone and on her five-channels iPad probably than I can. So, that's never been it. No, for me, it was always, it was, it was the sales, the marketing and the, the interaction with customer side of the business that really interested me.

Mm.

And, obviously that's, that's where my career went.

That's where your career went. But the conclusions of this review of the Japanese competition also...

Oh I see.

Was that when they...

Do you know...

Is that where IBM decided...

Well it's so long ago now, it's 1984, and I, I'm not sure I can remember what all the conclusions... I think, the conclusions were at the end of the day I think that, well, some of them were marketing actions, so, within each country, for example, there would be a, they set up a dedicated group of people whose job basically was to produce the material that the sales staff could use to, basically undermine the arguments of the competition. So I mean, there were structural things like that that came out of it, and, it was more really looking for the marketing and sales arguments. I don't suppose anyone redesigns the technology or anything like that. It was really just, how, how could we sell better, could we get the IBM arguments across better? And how could we, you know, dent the credibility in some ways of these organisations?

[42:15]

Yes. There was always some suggestion I think as well that, that makes, it's more than a suggestion, that there was some industrial espionage going on in which some of IBM's secrets were stolen by...

I don't know

...come company. Was that not, not established?

I, I don't know. I don't think it was anything I ever, ever came across, no. I suspect that they, as I said, reverse-engineered the product. I mean, they obviously bought IBM, Japan was full of IBM machines. I mean, all commercial companies out there were, were buying them. I have no idea that smart engineering people could, could, you know, decide how to, how to, you know, do something about this. But, also, I mean there are other companies doing things like that as well with the disk drives and with the memory in the States. So, so you, you know, you did begin to see other, small competitors coming along, all of whom were creating, were actually, you know, providing IBM compatible products at a huge discount to, to IBM. And that was, you know, that was a source of some of the problems I think that IBM ran into.

[43:30]

Mm. So as you said just now, you joined Hitachi Data Systems in 1987.

Yes.

What persuaded you to abandon IBM at that point, and, where you had been successful for 20 years, and join a Japanese company?

Yes. I think I saw my career perhaps slowing down a little bit in IBM. And I saw one or two promotions going on where I felt that I could perhaps have done a better job, rightly or wrongly, that was my opinion. And I, I concluded that... Well, and I was approached by Hitachi, it was actually then a distributor of Hitachi, called NAS, National Advanced Systems, which Hitachi within a year of me joining them actually absorbed into the business, six months later Hitachi bought them. But, they operated

through distributors. And, I was approached with an offer, you know, more than doubling my salary. I was beginning to think about, you know, eighteen years I think it was, nineteen years in IBM, and, I was weary of some things. You do get weary after a time. I also felt that, you know, we were running into some trouble with our, with our clients, being a little bit too rigid. And plus, as I say, I saw one or two things happen internally which sort of, convinced me that, you know, maybe I wasn't going as far as I wanted to in IBM. So, you put the whole package together, plus the fact that I did genuinely believe that I was going to go to a company that had good products, and that the issue with the company was not about the products, it was about, the image of the company, it was about the skills in the company, it was about the relationships that the company needed to create with the type of businesses that it wanted to do business with.

And how different was the culture and management style at Hitachi from what you had experienced previously?

Huge. Huge. It was, it was... The culture at Hitachi, if you went to Japan, or you met the Japanese, was not dissimilar. It was a big professionally well run business. But basically, they were selling into Europe through distributors, which were relatively small organisations initially, and, they, you know, the people they hired were much more of a gunslinger type of person than the sort of people that IBM had traditionally hired. And, you know, they were, they were fast on their feet sales guys you'd call them, OK, but that wasn't really what the market needed. They needed a bit more sophistication, if I can put it that way. And so, the culture that I found on arrival was, substantially different. Although it was changing, and the reason it was changing was because, all of these companies, the biggest two were Hitachi and Amdahl, which basically used Fujitsu equipment, the vast majority of the people were hired from IBM. So actually, you were beginning to see the, the change in the culture of these organisations to a much more structured approach, a much more, you know, professional sales-driven approach. And that was beginning to happen when I joined. And, over the years I was there, it was, to nearly all extents, completely transformed. You know, so, so... And that's what helped to make it successful.

And, I mean did you yourself... I mean you became Managing Director fairly soon after joining, didn't you, so...

I spent a year and a bit running various country operations in Europe. So the heads of the countries would report to me. And then, the vacancy came up in the UK, which they wanted me to take. So I became head of the UK operations for Hitachi.

Right. So did... So in that role, were you actively trying to change the culture of the company?

Yes. One of the biggest...

That was part of your job in a way was it? Yes.

Active... It was the, almost the biggest challenge was changing the culture of the company. As I say, making it more professional, putting the customer at the centre rather than, you know, rather than yourself at the centre of these things. And, it, it was very successful in the UK. I brought a few people in who had IBM backgrounds, who I knew, and, as I say, increased the professionalism of it. In fact, we, when I first went there, we were losing business when we were offering a similar product at half the price of IBM. When I left the UK operation, in '94 I think it was, in some cases we were, we were the same price as IBM and still winning business. I would say the differential had gone to, as low as ten per cent. So, you know... And that meant that, we were able to grow the company quite quickly. We grew it about fourfold in five years. So it was... And we changed the culture. And I was able to leave and move on to take a job running the European countries, B & Ls, and, the team I had there basically all stepped up. So, you know, I was quite proud of the fact that I had created a management team there that could, you know, just quickly follow, and, the fact that I moved on, made very little difference to the quality of the business in the UK. So, that was, that was good.

So, presumably you see that as your biggest achievement at Hitachi was it, those two things?

Yeah, I think it was. I think it was. Very much so.

[49:48]

OK. So having spent a couple of years in Hitachi Europe, you, you moved on I think, in about 1995, to...

Yes. Yes.

What happened there?

Well again, you know, I had spent the time there... The UK job was very very interesting, I entirely enjoyed that. It was a restructuring, and, I was asked to step up to run the Hitachi Data Systems subsidiaries across Europe. So the head of the UK, who previously had worked for me, worked for me, the head of the of the French operation had worked for me in Scandinavia, all the country operations worked directly for me, so it was quite a big job, and, I enjoyed it. But, increasingly Hitachi were, they were injecting more sort of Japanese style thinking into it. It was difficult to get decisions made as quickly as I would have wished. And, I didn't really, I wasn't sure any longer that, you know, it was where I wanted to be. There were no, there was no equity, you know, in these big companies, so there was very little opportunity for capital. Well I was paid extremely well, both in IBM and in Hitachi. [51:20]

You know, one of the things that you were quite interested in was to see if you could actually get some equity participation. And it was never going to happen in Hitachi. So, again, I was approached with, again, someone who manufactured compatible IBM equipment, a company called Cambex based over in Boston, in the States, and, to, to set up a European operation for them. Which sounded also very interesting. So the job itself sounded interesting; the opportunity, financial rewards, were, were good; and, I had a stake in the company in terms of some equity. So I decided that, it was time to move on. So, I, I took that opportunity. Which never really worked. It... I did set up operations in the UK, Germany, Italy, France, Belgium, but the product was not up to the job, and probably I should have done a bit more due diligence.

What was the product in this case?

The products in this case were compatible disk drives, disk storage drives. Which was a new product, but they had also in the past built a lot of IBM memory as well, which did work, worked very well. But, the pricing of memory just dropped through the floor at one stage, and that sort of killed that side of the business. And the other side of the business on the disk side never really took off in the way that it was envisaged. As a result, which, and this often happens, and I was, I was mindful of this at the time, with American companies, is that, if things aren't going well at home, in the States, then there's a tendency to, to refocus back in the States. So having set all of this up, a year and a half later the president wanted to, to really do away with Cambex Europe. What he didn't understand was, it's not that easy actually to get rid of people in France, Belgium, Italy, as it is in the USA. So I had to spend six months basically persuading him that, it had to be closed down properly. So I spent a certain amount of time building it up and then a certain amount of time closing it down sensibly, and looking after the residual of the customers that we had. So, it was a, it was an interesting exercise, but a bit of a diversion at the end of the day.

Mm.

And needless to say, unfortunately the equity came to nothing. [laughs] As, as sometimes happens, as sometimes happens.

Sometimes.

Yes.

[54:05]

And then you... Well I mean... I mean, as we'll see in a moment, this kind of, was the sort of route in to the rest of your career in a way, wasn't it, where you focus much more on being an equity partner and...

Yes.

...sponsoring development of new companies and so on. So that's quite a pivotal moment I suppose.

Well, yes, a pivotal moment probably came a couple of years later. After Cambex I joined a company called Spring. Spring Group at that stage was, was quite a big company, and in fact, it had obtained a lot of money from the US for investment in basically a buy and build strategy of consolidating smaller businesses in the, in the services space. It was IT training, and education, and IT contracting, and, also, IT, IT recruitment. And so it was... And it also offered contract services and things like that. So it was, it was a little bit of a conglomerate. And my job, I went there as head of corporate business development, was, was twofold. Firstly, it was to be involved in the acquisition of certain companies, which again was very interesting, and secondly, it was trying to integrate these various companies into, into a culture of cross-selling. So I ran a central group who looked at some of the bigger customers and the bigger options, bigger opportunities that we had, of trying to get different parts of the business all involved within that one organisation. So, business development in that sense. And it, it also coincided with, with the dotcom revolution, and we ended up, I was part of a sort of, the senior management team that ended up building something called spring.com, which was a, basically a, a recruitment business, which we spent something like £14 million on. However, the results of the company were such that the, the part-owners, it was a London Stock Exchange based company, but 49 per cent of the equity was owned by an American group. And in the end they wanted to strip it back down to just being an IT contracting and professional recruitment company, and to sell off other bits of the business, which was not something I, I didn't want to be in an IT recruitment business. So I opted to leave, on very good terms with them, they were extremely good about it.

[57:02]

And then I, the real change came when I went out to look for another position in the market, which was in 2000, and, I found that although there were a number of opportunities I could apply for, and I knew a number of the top recruitment organisations in the UK in IT, because I had used them myself to recruit people over the years, and so, I was sort of, on their radar, but, every time I went to go for a job, I didn't get it. And, what was never said was that, I was then over 50, and in the dotcom period they, they were, if you were over about 35, you were considered that

probably you didn't understand what the world was really about, OK. Now, OK, that sort of fell apart when the crash came, but... So for that period, I was sort of looking at this thinking to myself, what, you know, this is, this is a bit tricky here. And then, in fact, I had had a couple of non-exec positions already. In Hitachi, we had sold off part of the business, and 3i had put money in, and I stayed on the board, so I got to know 3i. I also became chairman of a software company in the mid-Nineties, 3i wanted me to do that. So I had some experience of doing that. And then I had another opportunity come to me at the same time I was looking for a full-time role, to be chairman of another company, and I thought, well hang on, you know, someone seems to value a bit of grey hair here. So, maybe what I should do is, is, rather than, you know, wanting to take another full-time role as a CEO in a company or whatever, maybe, you know, this idea of a sort of pluralistic role, usually associated with a little bit of equity, you know, was, really could be quite interesting. And so, from that point on, I migrated into a career which was basically acting as a non-exec chairman or director on a number of boards, which is what I've been doing since about 2000 through until, till, till now. I still retain a couple of, a couple of positions now, chairman of two companies, and, over the years I have variously had fifteen or sixteen different positions.

[59:27]

And most of these were IT-focused?

Most of them IT-focused. One was quite a big biotech company, and one of the ones I'm with today is an investment company, but, investing in disruptive technologies to some extent.

Was this the British venture capital trust?

The venture capital trust, yes. Yes, which started as a technology fund, but has become more of a generalist fund over the years. And so, so really, I got into doing that. And at times as well, you know, you find if you are chairman of a company, and you've got a problem, and some of these smaller companies will periodically have problems, so, at least on two occasions I sort of end up being executive chairman for a period of eighteen months or something while we try and put the company right, and

then, restructure it a little bit, or whatever. So again, there have been times when I've sort of been working, so, three days a week in the same organisation, which again, I'm happy to do, or was happy to do. So, so no, I've had a thoroughly enjoyable period of, what, nineteen years, you know, in these sorts of roles.

Mm.

And...

[1:00:38]

Just tell us a little bit about the, the role of venture capital in nurturing small companies, and your role in, how would you, how you would make an investment decision.

Right.

I think that might be quite interesting for the people listening to this.

Yeah. Well, there are... Right. I mean clearly there's a lot of private equity groups out there, but there are also quite a lot of venture capital trusts. The one I'm associated with, which is called British Smaller Companies, VCT2, because there's, 2, there's a VCT1 and a VCT2. We, the company itself consists of a board of three people, and that's the company. And we outsource everything out. So some of the minor things, like, like we outsourced... But the main thing that we work with is, we work with an investment management company, in our case YFM, which used to be the old Yorkshire Fund Managers, much changed now, and YFM are the company who do the work of assessing the investments. So they have investment directors, investment sales staff, in offices around the country, and they are the people who are out there finding the opportunities, or having the opportunities brought to them, to invest in small private sector businesses.

[1:02:01]

Now, the role of the venture trust is, they were set up, and the Government supports them, in order to put investment from people like you and me into smaller businesses as a way of getting, you know, getting these smaller businesses to grow, and

obviously making a contribution to the UK economy. And therefore, there are tax incentives for investors. The investors are all generally individuals who can invest anything from £3,000, £5,000, up to a couple of hundred thousand pounds, on an annual basis, and there are tax breaks that they get for doing it, in terms of the money going in, in terms of the distribution of moneys coming out, there are big breaks for it. Which is why it, it is watched very closely by the Government, to make sure that the money we're putting in is going into those sorts of organisations. I mean they don't look at each individual thing, but there are rules that we can invest, we can only invest in UK companies, and we can only invest in companies that are younger than a certain period of time. So these companies come to us; the management look at them; they'll put them forward to the board, if they think we should invest in them. We will have our own opinions on that. Assuming we do want to go ahead and invest, then they will carry out their due diligence work to finalise an investment, or not as the case may be. And then bring it back to the board, and the board will then invest. And we can invest up to £5 million. Again, there are limits on how, what you can do with the investment, but, in these days, there are changes in these numbers periodically, but these days, you can invest up to £5 million in, in a business. And, we regularly do that. So we now have about 40 businesses that we're invested in, various levels of money. Some a million maybe, some two, three, four million. And, there's a portfolio there, which, obviously over time these businesses are sold, and a capital realised, and it comes back into the fund. And the fund pays a regular dividend stream to, to, you know, to the investors. So, as I say, there's about 40, 40 businesses I guess in the fund at the moment, and, we have recently raised 30-odd million between the two funds in the space of about six, six to eight weeks, and we have about 60, 60 million of capital in those companies, all currently sitting in cash waiting to be invested, as we... So that's the process that we, we go through.

[1:04:54]

Just, one thing I didn't quite understand was, you said there was, the Government had a role in this somewhere. How did that work? Because I mean, that wouldn't happen in a sort of standard investment trust, would it?

No no. The Government has no, had no role in the investment or the, on deciding where the investment goes. The Government has set up the VCT companies, and, it

set them up to encourage individuals to invest in small businesses. So basically, it's the regulated...

A regulatory framework?

Yes. There's a regulatory framework around the VCT industry, which is put there by the Government, to make sure that the money is genuinely going, they hope, to benefit the small businesses which in turn will benefit the economy, and not going elsewhere. Because they are giving, in their terms, they're giving a substantial amount of government money away by, by not taxing the proceeds, and by giving a 30 per cent discount when you, when you put your money in. So, they, they keep a, a careful regulatory watch on it. They do not get involved, the Government does not get involved in the individual VCT funds.

OK. No I understand that. Sorry, I just wanted to clarify that point.

Yes.

OK

No, it was a good point.

[1:06:23]

And you've, in 2011 you, I think, I think you were a founder, was it, of Turnberry Management, along with John Falconer?

Turnberry Management is a personal consulting company with a chap called John Falconer. John and I were colleagues. We worked together at one stage on another, another investee company. And we decided that we would just set this up as a business, and we'd do two or three things. One is, we, we basically tried to help small companies find the right route to market, the sales route to market. The biggest problem that most small companies have at the end of the day is building the sales side of the business up. And there are many false starts, and each false start costs, you know, a lot of time and money for, for those founders and the people who are invested

in it. So, a number of things that we do are to help smaller companies actually get the right route to market for their products. And we also do a little bit of recruitment in the sales area as well, because that obviously is part and parcel of getting, not only getting the strategy right ,but you need to get the people right as well. And the problem is that, too many small companies, they go out and rush out and hire people, because they've got a good track record or whatever, and then when they sit and think about it, they actually haven't hired the right skills. Because the way they go to market is not directly, it's going to be through channels or something like that, and then you, you need an entirely different type of animal. So the two are interrelated. And, we do, we do a certain amount of that. But you know, this is pretty low key, and we take assignments where we find them. And, it can take a few days a week for a period of a few weeks, or it can do nothing for three months, OK. So it's, we, we basically, it's word of mouth and, you know, dealing with people we know. So, yeah, we set that up, and, we continue to run it.

[1:08:38]

Well, so where are you now? Are you beginning to wind down?

Yes. I'm winding down for two reasons. One is through choice, and the other is through, because I think I'm running out of people I know. And, I've had a pretty long, pretty long life at this. So, currently... I was actually with a subsidiary, commercial subsidiary of the BCS for six years, and that came to an end six months ago, because you can only do two three-year terms by statute. So, that came to an end.

[1:09:08]

What was that?

This was BCS Learning and Development, which was a commercial subsidiary of the BCS charity if you like. And I was an independent director on the board of that for six years up until last September. And now, I just have two roles at the moment. I'm Chairman of a company called KeyPoint Technologies, which is software for, basically, mobile phones or, laptops. And, I have been a non-exec director on BSC, the VCT, although, literally as of next, next Tuesday, I am taking over as chair of the

group. So those two, plus the work I do with Turnberry Management, is, is basically what, what I'm involved with at the moment. And you're right, it is running it down. I mean, at its peak I was probably on the boards of, say, six companies; today it's down to two. So... And I shall keep that going for as long as they need me or want me. And if other opportunities come up that I like, I take them, but, I'm not actively networking the industry at the moment.

[1:10:27]

Right. And with all the vast amount of free time you've now got...

What do I do with it?

What are you doing with it?

Well as I said right at the beginning, I've sort of reverted to reading a few history books. I play the occasional game of golf, which I would like to improve at, so I, I've... I actually had a replacement knee surgery last year, which kept me out for about six months, and, so I'm actually taking a few lessons now to try and... I'll never get any better. It's function of age, if you're not any good in your twenties, then you probably are not going to be great when you get a bit older. So, so I don't think I'll get much better, but, I might try. And, I also, I do some charity work locally in, where I live, which is basically, there's a group of us who are advocates, and we, we work with people who have problems in one way or another that we can help them with. So, can be something as simple as form-filling or, helping them get wills organised, or it can be deeper things concerning, you know, people who have got mental, mental health issues. And, we get referrals from adult and children's social services as well, where they feel that we can help people involved with some challenge that they've got in their lives at the moment. So, I do a bit of that as well, OK, so.

OK.

And I have four grandchildren, so, I do a bit of that as well. [laughs] OK.

[1:12:00]

Looking back on your career, I mean, you're a highly experienced and successful business person. And, I mean unlike some people, I think, I think it's fair to say, you didn't benefit from any family connections to get started.

That's, that's... For sure.

Doesn't look like it. So, what... You made it. Many don't. So, to what do you attribute your success?

[pause] I, I think that... And basically, I was fortunate, I think I, I was born with a fairly good brain, and I'm moderately articulate, and, I work hard. And I've, I've always enjoyed it. I mean, I think you have to have that. I think it's hard... You know, I don't have a passion for computing, but I did have a passion for, for sales. You know, there is something about a great sales campaign that gives you great pleasure. And I do think you do need a, a certain degree of, of passion in whatever you're going to do, if you're going to be successful at it. I mean, I fell into computing by chance, and it has been, it has been, again I think a factor of, of probably everybody's career, that, there is an element of luck, as well as judgement and hard work and everything else that goes into being successful. I think most people, if they were being honest, would agree with that. So, I've had, you know, one or two lucky breaks. As I say, I work hard, and, you know, I've got a reasonable mind, and I think can probably present my case reasonably well. So I think all of those things go into it. I also think, on the whole, I'm a sort of, social animal, and, you know, at the end of the day, it's, it's not solely what you do. It's how you get on with other people that matters a great deal in business, and in life. And, you know, I, I think...

So colleagues and friends, they'd be important to you, and they've helped you in, helped you develope your career?

Oh absolutely. Absolutely. Colleagues and friends are very important. As I say, I've got a lot of friends. I mean, as I said, when I joined IBM, I mean it was a very young industry, the people were all similar age to me, and I still have many friendships with people that I worked with in IBM in the formative years, as well as, as I said earlier,

in my school years as well. Yeah, I mean look, it's, it's just life. I mean if, if you treat people badly on the way up, they'll treat you badly on the way down. And we all have ups and downs. So, these people have been very helpful to me, and I think it's, I'd like to say, I think I've been reasonably helpful to a number of colleagues as well over the years. And, you don't do it because you think it's going to benefit you; you just do it because that's, it's sort of, human nature for some people to do that, that's all.

[1:15:05]

And what would you say was your proudest achievement?

[pause] I, I think, the time I spent at Hitachi in really completely changing the way that Hitachi in the UK worked, was my greatest achievement. I mean a) it was very successful commercially; b) it completely changed the culture of the organisation. Although, as I said earlier, that was beginning to change anyway, but it certainly was a factor. Thirdly, I brought in an excellent team of people, and we, we were a very strong team. And, you know, we, we, we not only grew the business, but we had, you know, great relationships with a vast portfolio of very large clients in the UK as well. So, those were, those were pretty good days generally. There are ups and downs always, but, you know, I can say that that was, that was a pretty good time. I think that was quite an achievement, that I would say probably I, I feel best about. Although, in these non-executive roles, I don't think you should ever take too much credit, because it's the executive team that really drives the business, but, there have been a number of instances where I feel that I've made a, an important contribution, and therefore, you know, I feel, I feel good about that. But as I say, you have to be a little bit careful, because the one thing you don't want to be as a non-exec is an exec, you know. [laughs] It tends to get in people's way.

[1:168]

If you had your time again, is there anything you would have done differently?

I, I knew you were going to ask me that, and the answer is, I, I... I don't know. I probably... I... A lot of my friends and colleagues have stayed throughout their career with IBM, and to be... and they've been well looked after by IBM for doing

that. [sighs] I often wondered whether, you know, I could or will have done that. I, I just don't think... I don't think I would, and therefore, I wouldn't, I wouldn't change that. I think leaving IBM was good for me. I think leaving Hitachi was good for me. I probably left that for the wrong company, but I think, there is a time to move on from these things, and I've had a very varied experience, which you, you wouldn't get by being, you know, wrapped too much into one or two organisations. I mean I benefited enormously from, from working for those many years with IBM. I think it, it is, it was, it probably still is, and I don't think it very closely now, you know, a masterful company, and, you know, it was good to be associated with it. But, I don't. You know, you fall into some of these things, and they weren't all conscious choices that, well they were conscious choices, but, I didn't set out in advance in some cases, a long way in advance, to plot my career. These things come up, and you, you take a view at the time. And I don't think there's too much I would change at the end of the day.

[1:18:29]

And what do you think are the biggest challenges and opportunities for the IT industry in the next ten years or so?

Well I, I think, firstly, we keep calling it the IT industry, but I, it's sort of changed now. I mean, the use of this type of technology is universal. I think, it is disrupting a lot of typical business patterns, and will continue to do so, and it is, it is really a part now of every industry. I mean it doesn't matter whether you are in retail, or public sector, or, property, or whatever. I mean there's no doubt that technology, and further use and deeper use of that technology, makes, makes a big difference to your competitiveness in those sectors. I mean the big thing that's happening now of course is the use of artificial intelligence, I mean, which can theoretically transform, you know, many things, from driverless cars through to robots in factories. I mean you look at these big distribution warehouses these days, and the number of people they employ is relatively small compared with the, with the technology that's there, you know, distributing, basically picking and distributing. So I mean I think, anyone that wants to go into IT has, has a huge opportunity in front of them. I mean, it's going nowhere but, but, but growing. So... And, and you've also got the other associated thing with the artificial intelligence which is the, which is the use of data. Obviously

there are issues around how you can use data, personal data, at the moment, which are well aired, but, you know, the data is there, it's being collected, it exists, and there will be uses for that, legitimate uses for that, which again will, will enable a transformation of the way in which people market, advertise, sell, et cetera. So... I mean I would advise anybody, if they have the bent for it, to go into, you know, the sort of IT world these days, because I think there's a great opportunity there, and that's still... And the other thing is, there's lots of, you know, there are going to be many many, many many new small companies created over the next decade or more, not more, but, you know, hard to look further than a decade in the world we live in today, it's hard looking that far, but, but there are many small companies are going to be created, which will give people, you know, opportunities, challenges and fun as well.

[1:21:19]

I think one of the unfortunate things is, is that, somehow it doesn't seem to attract people into, into the IT sector. I mean, everybody is using it, from an early age, but people coming into the industry, it seems, you know, there still aren't enough, and we've got the perennial issue of, for some reason, girls don't seem to be attracted, you know, to it at all: well not at all, but, a very low proportion, too low, of, of girls, women, coming into this sector. So, how you change that is probably an interesting challenge for somebody.

OK Peter, thank you, it's been fascinating hearing about your life and career. On behalf of Archives of IT, thank you very much for taking the time to talk to us.

It's a pleasure.

[End of Interview]