An Interview with

Peter Watson

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Conducted by Philip Frana

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Peter Watson Interview

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Abstract

Peter Watson is founder of Berkeley Computer Services Limited (BCS), one of the oldest continuously operating software houses in Scotland. The company was established in 1978, and is based in Glasgow. BCS’s first customer was Kangolwear. The company moved into healthcare solutions in the 1980s. In 1991 the company launched the integrated software package Masterlab, first implemented at Neville Hall Hospital in Abergavenny, Wales. In 2002 BCS was one of the largest providers of laboratory information systems in the United Kingdom, supplying its Masterlab integrated software package to approximately 40 National Health Service Trusts. The company has recently been acquired by Torex Laboratory Systems Ltd.

In this oral history Watson describes his early life and education, his work as an actuary for Standard Life Assurance, and as a programmer at Honeywell Controls. He describes his role in the development and troubleshooting of several innovative programs and systems. Watson also recounts early efforts to establish financing and a customer base for BCS, including the development of complete information systems for textile manufacturing, whiskey distillery, building contracting, and many other business sectors. He also discusses many of the unique aspects of Scotland’s software industry.
Frana: Peter, thank you for agreeing to sit for this interview. I was wondering if you could begin by telling me a little about your early life, growing up in Paisley, and how you became interested in mathematics.

Watson: Right. Although I was born in Paisley in 1947, I probably spent two months there. My father, when he came back from the war, decided to buy his father’s business. It was a plumbing business twenty or thirty miles south of Glasgow. He bought it and worked there. But the business was in a bad condition when he got there. It didn’t survive and went into receivership, and so my parents had no money. We then moved, probably being chased by creditors, over to Edinburgh. I was brought up in my early school years in Edinburgh for six or seven years and that’s where I went to school to start with.

Frana: Last night we had a reception with your mayor. He said, “I’m surprised just how far away some of you came for this conference. Some of you came from as far away as Edinburgh.” I understand that there is a rivalry.

Watson: There certainly is a rivalry. I was brought up there, but then my father got a better job in Glasgow, where he eventually became the director of a building company. We moved to Glasgow and my secondary schooling was in Glasgow.
Frana: Did your father have a formal education?

Watson: Yes, he did. He had a degree in building—civil engineering—from the local college of science and technology.

Frana: Tell me about your interests in school.

Watson: At school I played chess. I became a chess internationalist for Scotland. That didn’t mean very much. Scotland against the rest is like a minnow against the sharks. But I did play against America in the Student Olympiad. At school, science was the one thing I probably excelled in. I did much worse in everything else. I decided to go to the local Strathclyde University, majoring in pure and applied mathematics.

Frana: Now it must have been a very new university at that point.

Watson: Yes, it had just become one. I was one of the first students to go to the university. They didn’t really have a big arts area. So they were trying to get on things like geography. They were very, very strong—and still are—in science: ship engineering, shipbuilding, and nautical science. They’re still highly renowned in these areas. I went to university in the typical, old-fashioned, Victorian-type lecture rooms with 600 other students. The professor would come in looking as if he’d gone through a hedge backwards, talking nonsense, scribbling things you couldn’t read, and hoping that you would actually achieve anything.
Frana: So it was a very passive education.

Watson: Oh, yes. There was little interaction. I had to take science as well, what we called natural philosophy—which is physics. There were physics labs that you had to attend. Because it was a university, they insisted on science students taking subjects that were not science. So I took things like geography of population. I did two years of geology as well as pure and applied math. And that got me outside and making maps and things like that—climbing up hills twice a day to find rocks. Unfortunately, the person who wrote the book and was my lecturer was a Welshman from a leading university in Britain. And because I was the non-geology student in the class, I was the one set upon to identify things first, so everybody could laugh about it when I got it wrong!

Frana: There are actually some petrochemical software companies in the neighborhood that probably know fair amounts about geology aren’t there?

Watson: There are one or two companies that specialize in fluid control in pipes, and things like that.

Frana: But this wasn’t the direction you intended to pursue.

Watson: Not at all. Computers at universities were just not on the agenda. There was a computer. It would probably take up a room the size of this room here: 20 feet by 12 feet.
The people who were in that department managed to get it to sing “God Save the Queen” and things like that.

Frana: Yes. I’ve actually heard similar stories, with perhaps different songs.

Watson: Yes, different songs made with the card reader, or the paper–tape reader, or the printer. That was the best thing it ever did. It took a lot of air-conditioning and power.

Frana: Do you know what kind it was?

Watson: I have no idea. We didn’t really have access to it except to look at it and hear the noise—that was it.

Frana: But you did take Algol programming?

Watson: I did Algol at university for a few months. We all had to write a program and be tested that we could actually write code. Goodness knows what I got it to do.

Frana: You did this on coding sheets then?

Watson: Yes. You would write coding sheets and it was submitted to the computer staff. Somebody would then type it onto paper tape. It would run on the computer and you’d get an answer back and that was it, whether it ran or didn’t run. There was no real use for
it. It was just there. I think the people had no idea what we were going to use computers for. It was just a good idea at the time.

Frana: When you completed your degree you started to do calculating rather than computing?

Watson: Because of my chess background, I was always going to teach. During university, I used to teach at a local primary school. I was the only chess teacher employed in Scotland at the time. We tried to do a study to see whether playing chess in a school actually helped the children in other areas. I had to write a project on the improvement that was felt. In summary the children became more competent in all aspects of school. So I was aiming for teaching when I finished my degree. Looking to see how much teachers were paid, however, I decided that I wanted my sports car, and instead went into assurance work in Edinburgh, as a trainee actuary. This is probably the highest paid job for a mathematics student, even now.

Frana: An actuary?

Watson: An actuary. I went back to Edinburgh and was there for a year working in the company’s valuation department. But it was really very boring during the day. You always studied at night because every year you had a certain set of exams towards the actuary, and it was exams where so many people passed and everybody else failed. It was a floating pass mark like 98 percent might pass. If you got 97 percent you failed. You had
to study. But having such a boring job during the day just wasn’t very good. And that’s when I used early Brunsvega calculators: twirling the handle and pushing levers backwards and forwards and writing down the figures. Basically, the company did have a computer. It did simple things, simple evaluations *en masse* for pension schemes in Britain. But the valuation department did anything more difficult, like currency transactions on South American type policies.

Because I was actually pretty bored, I said to them, ‘Now that I’m bored, put me to the computer department that you had promised at my interview or I’m going to have to leave.’ They didn’t honor what they said they were going to do, even though I’d passed my first year’s exams. To be honest, the person who sat beside me was in exactly the same situation and he is now the chief executive of the company. And so he’ll be on his million-pound salary.

Frana: He stayed, and you left.

Watson: He stayed. But I don’t regret leaving at all. At that time I was earning just about £750 a year as a trainee actuary. My only computer involvement was dropping 4,000 Hollerith cards in George Street, Edinburgh, in the rain on the way to the company’s computer center.

Frana: That would have been—
Watson: That would have been 1968 or 1969.

Frana: When you were at Standard Life Assurance?

Watson: Yes.

Frana: So after one year you moved on.

Watson: I moved on, and became a trainee programmer at Honeywell Controls in the Newhouse factory which is situated between Edinburgh and Glasgow—and getting paid an extra £400 pounds a year. Which was wonderful for a young person. There were fifty programmers and fifty punch girls typing Hollerith cards. We were out every Friday night because somebody was always coming or somebody was always leaving. We used to take over the upstairs hall of the local pub and that was, as I said, every Friday night.

Frana: You were still single?

Watson: I was still single, very much. It was good fun. That was probably when it was real computing, when you were pioneering. Probably some of these programs still run today, in fact. It’s amazing how they’ve survived. At this time it possibly took several weeks to write an individual program—with steps such as flow charting (checked by senior analyst), coding on to sheets (visual check), cards punched—one per line of program, visual check of card printout with amendments being substituted, entry on to
I spent three years there. When I was at Honeywell I started as a programmer but was ultimately in charge of the development of the order processing and finished goods control systems for all the Honeywell factories in Scotland which made temperature control units at Belshill: Newhouse made micro-switches and another one, Uddingston, made industrial products. I was on call every night, and got phone calls at any time.

Frana: What kind of machines did Honeywell have on site?

Watson: Honeywell 2200’s. They were tape-based, with belt printers for output. They needed lots of air conditioning; probably had 12K worth of memory. Housed in five or six big cabinets. I remember coming to the computer room once and an engineer was there trying to find a particular faulty memory card, and all you saw were these memory cards being skimmed all over across the computer room. And then we got disk technology in at Honeywell.

Frana: How did those work?
Watson: Never. Well, they tried to get them to work for six to nine months, and then the managers decided that this phase in computing will pass by, and disks have no future, and let’s just stop it. And so they were removed and we continued with tapes. We used to consider ourselves the best tape installation in Scotland then, because of how efficient we were in using it.

In 1972, I was approached by a former manager to come and join him at Stenhouse Insurance Brokers, which was an international insurance brokerage of some repute, with offices in America, Canada, Australia, South Africa, Britain, and other parts of Europe. I was asked to become their development manager. They were putting in a new system in Australia, which had to be designed from scratch. This new system was then to go to all the subsidiaries everywhere.

Frana: You would be doing contract work for other firms too?

Watson: No. I think there were contractors around, but none of them were self-employed. The number of programmers around was quite small, and everyone had trained programmers because programs individually took a long time to develop. You needed a lot more programmers at that time than now to write systems. And there never were enough programmers to go around. So programmers were paid a lot of money, they were definitely the best paid of those at the technical level. I probably didn’t move for much extra money, but I did move for better technology, and Stenhouse were definitely going to move into disk technology.
Frana: Were they using Honeywell equipment?

Watson: Yes. We had to install the same disks that we had chucked out at Newhouse, and eventually got them working successfully at Stenhouse, and once we got the application system up and running, I had to go out and install it in Australia. Again, it was mainly running in batch-mode: people would submit their transactions to a punch girl, who would type them, submit a job to the computer, and get results back. For instance, if someone was writing a quotation, they would write it on the coded paper. That form was submitted to the punch-room, typed on to a tape or card, entered into the computer, and they would get the results back in time. Users had no direct access to the computer.

At that time there was no such thing as PCs or screens or any user access. That came on a couple years after that, and we programmed Datapoint 5500’s (or something like that). That gave us the position that somebody in our branch office could type in instructions using a screen. I think nobody had decided how these computers were going to take off, how they were going to actually work. When we programmed them it seemed to be revolutionary. We were one of the first people to use the 5500 almost as a front end to a batch computer. In fact, we had a 5500 that was sitting in Wellington in New Zealand, and the transactions were submitted after entry in batch to Sidney, Australia, and processed. The results transmitted back up.
Frana: And because of that great distance there was unique use of the newspapers in order to transfer?

Watson: Yes. We were here in Glasgow and there were no company programmers in Australia. So if there was a problem we would have to try to fix it blind. They would say what the problems were; we would look at the problems here, and try to come up with a fix. We would probably get them to type up a particular card or cards, because programs were stored in card, and correct it, and put it on binary tape—they were run with binary tape. So if it was a program error you had to then create a correction card, set it in sequence, change the binary by compilation, and away you went. Most of these corrections were made blind. However, we once had a position where we had quite a serious data error, we had to stop the machine and seemingly had no option but to actually get on a plane and fly there, which at the earliest would be almost a couple of days even if you could get on the right plane. We decided to write the program out—or get it typed out—and tested in Glasgow, and printed on a bit of paper. We then used the local newspaper company here, the Glasgow Herald, I think, to send it to the Australian Post. And so it was transferred between the two paper companies because at that time they had the technology to transfer pictures. Pretty poor, but it still had data images and it was the only way we could get a picture of the program there fast. And from this picture of the program, the Australian staff typed the cards, and corrected the fault.

Frana: I’m still not clear, why did they need the picture of it?
Watson: They had to type the cards, so we sent it in English. The picture was in English, all the coding sheets basically in English. And they then had to type cards from that and put it on to the computer there.

Frana: And you used that solution many times?

Watson: No, just once. I don’t know if it was particularly successful, because in those days if you see somebody’s picture being sent and what’s received, the picture makes someone look pretty old or pretty young, so our program probably lost one or two instructions in passing. But we did try it, and it probably was never done by anyone else before or since.

Frana: How long were you with Stenhouse?

Watson: I was there five years.

Frana: And you rose to what level there?

Watson: I was international development manager. We’d put in systems from Europe and France, and we’d convert them into French from English as The French don’t like ‘talking’ to computers in English. I went to South Africa too. We spent a lot of time in Lloyd’s of London, writing the Stenhouse interface to the Lloyd’s type insurance broking market. I’d gotten married during that period; my oldest boy was around and my oldest
daughter was on the way. The operation’s manager and myself decided that working in Stenhouse was not giving us fantastic job satisfaction, though the job I had was probably the best job in Scotland for a developer. Our boss at the time thought systems could be designed in ivory towers: “Don’t tell users what we’re doing, give them the system, and that’s how we’re going to do it.” End of story. And we thought this was a bad thing to do.

We decided that there was a place in Scotland for an independent software house that could do work for other people, and we decided we would be that software house. So just before Christmas, a quite momentous time—the 23rd of December or thereabouts—and my wife eight months pregnant, we just said goodbye with nothing concrete to do. And that’s what we did. We were quite innocent, and didn’t know anything about business.

Frana: Probably best to be naïve—if you’d only known.

Watson: Right. After about three years we looked at each other and said, ‘If we knew how hard this was going to be we would not have done it.’ But we did.

Frana: Where did the name of your firm come from?

Watson: When we set up, we actually called it WM: ‘W’ for Watson, and ‘M’ for Muldoon—WM Software Products. It was a partnership. We found offices in the basement of the National Union of Boilermakers—used a few years previously as a meeting room for an obscure Christian group. It is still there: it’s a Victorian terrace, and
we were in the basement. That’s probably where the cooks and the butler would have been when the house was first built. The rooms had orange walls and blue skirting. My first job was to paint the rooms, get carpet and desks and hire a secretary. The name of the company provided a laugh to the business community as, within weeks, we received an official inspection from the local trade council to see if we had set up a textile “sweat” shop in the basement manufacturing textiles using cheap labour – they read software as softwear! In our one-month notice period we managed to pick up a job from a company called Kangolwear, which made ladies hats. In fact, it made the hats of Princess Diana; she was a great fan of them.

Frana: Did you know you had that account when you left in December?

Watson: No, we didn’t know anything.

Frana: Charlie Muldoon was working with you?

Watson: He had been the operations manager in Stenhouse, Glasgow for two years. So we were at a similar management level.

Frana: So it was the two of you and a secretary.

Watson: There were two of us to start with; the secretary came after a bit. Prior to joining Stenhouse, he’d been a management consultant with PA Management Services, and
Kangolwear had been one of his old clients. When we decided to set up the software house he phoned them, and they said that they needed someone to look at their current computer system and would we do it. That was the first job we did, to go down and look at the computer system and advise them. They said to us, “That’s very good. Consultants are always good at giving advice. Put your money where your mouth is and actually go and write a better program.” So we went from a consultancy to someone actually designing programs. This meant that we had to go and buy a computer to start with.

Being in business three or four months, and making a profit at the time, we went to the bank and said we would like to buy a computer. We said, ‘Please would you give us a loan. It’s only £43,500.’ And the bank took three or four weeks and said, ‘We think you’re doing okay, but we’re not going to give you a loan. You’re just not a good risk at this point.’

Neither of us was going to put our house on the line. We weren’t going to offer any security on our homes. When we left Stenhouse we told each of our respective wives that their house would not be risked for anything. We would work all the hours of the day, but we would not put the family home up for grabs. And we didn’t. Maybe our houses wouldn’t have been worth much altogether, but it might have been something. But we weren’t willing to do any of it. It so happened that we were walking up the street and we actually met an ex-director of Stenhouse. He had left them in a boardroom dispute. He was suing them for a million pounds for wrongful dismissal. He had decided that he was going to win, but that he wanted some tax losses at the time and could he do anything to help us.
Frana: Fantastic luck.

Watson: So we said, ‘Well, you could lease us a computer.’ So he and another ex-director of Stenhouse who had been the financial director jointly put up the £43,500 to lease a computer. We decided at that time to become a limited company because having an asset, and writing programs now, somebody could take objection to what you do and sue you. So we said, we’re a limited company; you can’t go for our homes. We invited the two of them to join us on the Board as non-executive directors because they had some business knowledge that we did not have. We decided to name ourselves after the street, which was Berkeley Street. We were really that inventive.

Frana: Well, it’s a very fitting name. It’s as fitting as ‘Babbage.’

Watson: The trouble has been with the name in Britain. It becomes ‘Barclay,’ you know like ‘Barclay’s Bank.’ In America it’s fine—they all say ‘Berkeley.’ In Scotland they say ‘Berekely.’ We’ve been called lots of different names.

Frana: And that creates some confusion.

Watson: Always—especially with the spelling. But that’s how the company got its name.

Frana: So at that point were you thinking about turnkey systems?
Watson: Yes. We were doing turnkey systems right from when we started to work with Kangolwear. They were all turnkey systems—textiles, plant hire, building contracting, wholesale trade-counter, coal-mining, whisky distilling, beer distribution, house building, point of sale retail, agriculture, insurance broking. Anything that moved, we would do, whichever type of system. We designed each from scratch. They were run on the Honeywell Level 6, which was a minicomputer that Honeywell produced. We became Honeywell’s first reseller in the United Kingdom. We bought a Level 6 from them. They were paying discounts of up to 40 percent from the list price, and consequently we would sell the computer on to the client, and not charge the application software because you got this money from the hardware. And so you were giving software away for nothing. Today you almost give the hardware away for the software.

Frana: It is—it’s quite the opposite.

Watson: It’s totally opposite now.

Frana: So who were some of your other early clients?

Watson: We had a building contractor in Glasgow called Melville Dundas, which probably started in the late nineteenth-century. They did prestigious building work. We wrote a contracting system for them; purchasing system; sub-contractor system. And William Grants Distillers, the producers of Glenfiddoch Whisky. So we did systems that
controlled the purchasing of raw materials, the blending of the whisky from old malt, etc., all the way to the offices selling it. So that was another one. We did British Gypsum for making plaster board liner. You had a board machine that would be a couple hundred yards long, and we used the computer to control that machine as well as the normal commercial order processing, things like that.

Frana: Numerical control devices.

Watson: Yes. We did the numerical control.

Frana: So you were starting from scratch each time.

Watson: Each time we would have to learn the business, learn the techniques of that business, and away we went.

Frana: How quickly did you grow then? Were you bringing on new employees as you went?

Watson: Yes. We started bringing on employees, mainly programmers, and we quickly went to twenty and thirty. Then we hit a plateau—and then, probably a few years after that, we started going again, until now we are forty-eight.

Frana: How many years into the business was that, that plateau?
Watson: Probably about six years.

Frana: Mid-1980s? The economy was a bit soft at that point wasn’t it?

Watson: Oh, yes. We went through four separate recessions. We never paid off employees in a recession. We were quite careful in taking people on. We always said it’s long-term jobs we’re after—long-term security. So we didn’t take on people with the hope or anticipation we’d get better quickly. But yes, we struggled through recessions where things were very, very hard for us.

Frana: Where did your employees come from? Where were they trained?

Watson: Mainly locally. A lot of them had been to university, it was their first job out of university, and a lot of these are still with us. Of the forty-eight people here now, probably fifteen of them have been with us for the best part of eighteen years.

Frana: Is that a unique situation?

Watson: Very unique for software houses that people stay. In Glasgow, if people can get local work, they would not want to travel. So people coming out of university, they’re trying to get a local job before they move. So Glasgow in many respects is quite introverted—people like living here. People would actually go to school here, go to
university, and then stay here. People down in England don’t understand that. They move around a lot.

We’re one of the software houses that probably can challenge employees every day. Maybe not pay them a lot—we’re not the best payers in the marketplace. From a financial return, we’re in the upper bracket. But as competitors for staff here we’ve always had every computer manufacturer worth a salt that has manufactured in Scotland. They all want the cream of the crop. We’ve also got all the banks and insurance companies. Scotland is quite a high finance center and they pay a lot of money, because software production is not the industry they are in. They don’t have to worry about people making a profit. So they can artificially push the market up in wages, and they did. And what we offered people was actually the challenge of doing something we can be proud of, something that was meaningful at the end of the day. Every system we have done has either been life-critical or has been mission-critical from a company’s point of view.

We always wanted to look after employees. You’ve got the learning-training curve, you’ve got the cost of replacement if you have to have it, and I always thought it was just stupid economics. We had to make a profit or we wouldn’t be in business. Profit was a problem. Maybe we could have actually made more profit if we were that way inclined. We were very much making sure that the staff and our customers came first. But we had to make money.

TAPE 2 (Side A)
Frana: How did you come to move over here?

Watson: We were at Berkeley Street for three years. Then we got too big for the basement. We took over the first floor, got too big for the basement and the first floor, and decided we had to leave. We found an office—not this one—about two or three hundred yards away from Berkeley Street. We had two floors of a Victorian house, two quite large floors, and we lived there for three or four years. And then we had to move again. We decided that if we were going to be a software house that survived, we had to look the part in a building that showed that appearance.

Frana: So you had to look ‘professional’?

Watson: Yes, that’s correct. This building had been on the market, as a floor, for quite a few years. So we got preferential terms to move in. It wasn’t like this; there was no air-conditioning, there was no double-glazing. If we had been sitting here then, you’d have heard the bagpipes playing outside everyday, the bus everyday, and everything else. The office was not particularly good from that point of view, but it was very central being in a pedestrian precinct.

Frana: Was there no hippie, hacker culture among your programmers? The employees weren’t sleeping on the floor during the day, and working all night?
Watson: Definitely not. Remember, we’re from Scotland. I think we’ve always tried to say that people should work between 9:00 am and 5:00 pm. Sometimes we had to work through the night to get things prepared. But what we don’t want to do is start a culture of always having to work all night. In the early days, yes, I could work seven days a week and every night, but now it’s not a great thing for me to do, or any of the staff. We actually caution people from doing it, because basically the work they do after a certain time is rubbish.

Frana: Did you ever consider hiring ‘professional’ management?

Frana: No. We’ve always been from the seat-of-your-pants, and common sense. We have adopted a scheme that’s widespread now in Britain, and that’s called ‘investors in people.’ Basically it’s this: ‘Look after the product and the people, and everyone else will look after themselves.’ Have a business plan that everyone sees, approves of, and is willing to go with. The business plan will then feed individual department plans, or unit plans, and each of those department plans will feed an appraisal system with individual personal objectives for that year. So if he gets his objectives, the company is going to make its business plan.

Frana: How many years have you been using this scheme?

Watson: About five or six years. Up to that point it was all quite ad-hoc and we hoped for the best. We were obviously quite nice employers but we had to have some sort of
strategy for running the company when it got bigger—and when the systems themselves will be adopted as market leaders or plan leaders.

Frana: As it got larger, how did you divide up management of the company?

Watson: In early days there were program writers and installers, there were people who maybe worked in a room with accounts, and there were people who sold. Latterly, when we included the laboratory systems that we programmed we had a commercial team that did commercial programming for organizations, and a team of people who worked for the health service and laboratories. We decided at the end of the day that we couldn’t be all things to all men. We couldn’t be the best people at whisky-blending systems, or bottling systems, or contracting systems, etc. We had to select just one of them. So we decided to select our textile system—the one we’ve always been in, the one with the best reputation. We narrowed the focus just to one system on the commercial site, which was the package ‘Masterpiece,’ and one on the laboratory site, which was ‘Masterlab,’ beginning in 1989. So we had two.

Frana: And that decision, again, was made about five years ago?

Watson: We probably made it about five or six years ago.

Frana: And when did the ‘Master’ lines start?
Watson: They went back probably fifteen years ago.

Frana: Did you bring in marketing consultants for that?

Watson: No. I cannot remember if it was my idea or not. I don’t know how I got the word ‘Master.’ It was just one of those things. I think the first one had to be ‘Mastermerchant.’ ‘Masterpiece’ we named after a piece of cloth, an individual garment. We did ‘Masterimage’ for a radiology department in a hospital. When patients booked themselves for an X-ray, we produced all the labels and documentation, we would signal the porter to come and take the patient to the unit to be X-rayed, and we would hold the final report on the computer. But later we decided we couldn’t do both radiology systems and laboratory systems. We weren’t big enough to be the best in the world in both of them. We weren’t planning to be the best in Scotland or the best in Britain—we wanted to be the best in the world.

Frana: Did you have serious competitors in any of these areas?

Watson: When we started the laboratory site and we knew nothing about laboratory work, and there were thirty-five competitors in the field in the U.K.—all with installed sites. But after about a couple of years, we were still there with Masterlab, and some independent consultants used to come and say, ‘Peter, we didn’t know how we’d manage to continue. We’d thought we’d go out of the market a year ago.’ We just persevered and now 20 percent of the National Health Service in the U.K. uses our system. The only
system that has more installed sites than us has been there for twenty years. But we’re whittling them down.

Frana: Does Masterlab include diagnostic modules?

Watson: In some ways, yes. Parts of it are diagnostic. If somebody has a screening program for, let’s say, Down’s Syndrome or a neurotube defect, it will give the possibilities of the actual fetus having Down’s Syndrome. So the mother or parents can decide whether they want to proceed with the pregnancy or not. There are areas where it will help laboratory people make a decision. Areas where they can put in their own formula so if you got the actual numeric results in twenty or thirty tests of blood or urine, that it can actually do a prediction.

Frana: You must have brought people on board who understood laboratory testing?

Watson: In the beginning, no. We worked with a particular hospital.

Frana: Which one?

Watson: Neville Hall Hospital in Abergavenny, Wales. It’s probably the only hospital we could get in Britain to work with us. It’s still there, it’s a reasonable sized hospital, probably smaller than average. Hospitals and laboratories in Britain can be much bigger. But it’s still there, it still runs the system, and now is part of a bigger hospital group.
Frana: So do you feel you violated the CEO principle of never taking on something that you yourself don’t ultimately understand?

Watson: No. We’ve always said that we’re the best analysts in Scotland. And we can start with a blank bit of paper, and pick up requirements quite quickly. I think that’s the main reason we’ve stayed in business. We’ve been good enough to do that—start from a blank bit of paper and generate something that’s acceptable, very acceptable. I don’t think we’ve had any particular methodology, where we’ve said, “This is how you do it.” I think we’ve been quite natural, we probably had the natural ability to do it.

Frana: So a little black magic still exists in this business.

Watson: Yeah. I suppose if you go back to my chess playing days, when it was a case of never giving up, even the little things. We always tried to be logical in the planning aspect. I think that’s probably one of the reasons why we’re still here and we’ve not been put off by something that appears difficult. We’ve always managed to find the best way forward, or an acceptable way forward. We’re not trying for the 100 percent solution; we recognize the 100 percent solution never exists. Rather, we’re looking for a solution that is acceptable in all cases. And we do it even today—even though we’re never going to write from a blank bit of paper again because we’ve got packages that are always being added to. We challenge ourselves every time with additions because they’re not done anywhere else. No system’s got some of the things we’ve been looking at.
Frana: How does your revenue stream work? Is the real money made on the service side?

Watson: In the laboratory site, revenue from ongoing support is the thing that can drive the business forward because it’s guaranteed income: you know it’s coming in, you know how many staff you need to support that income. And if you’re looking at new sales doing it then it’s always a hard life. You always have to make a sale at any cost to make sure you’re remaining in business. Having an ongoing revenue stream has to be the road to success.

Frana: I’m told that the high-tech economy here has been going through as difficult a patch as it has in the States. Torex just acquired your company this spring, and no one is acquiring anyone in California right now. Can you explain that?

Watson: I think over the last three years in the laboratory site we have been the top system, the top company. We are probably winning more than 50 percent of the procurements in each year. So that sets us apart in our market sector. But over the last year or two, because there have been problems in the North American market, some North American companies are looking at Britain as a way of off-loading some systems without making a lot of money out of it. There are four or five of them right now, all trying to come into the British market at cost. There have probably been a couple of systems purchased where the hospital, in the financial sense, has made a real killing. This is a periodic cycle, it’s happened in the past. When the American market is on the uplift
again, the American companies decide that their subsidiaries, if they’ve got them here, have to make a better turn on the investment, and so the prices go up. Britain’s very much about the National Health Service, financed by the government. America’s a private health service, mainly. When somebody goes in for an analysis in Britain, it’s the quality of the analysis that counts. In America, yes, the quality is important; but the invoice billing at the end of the day is the most important part of the system. So the two systems come from different viewpoints.

We might be going up against a European company, which does well in Germany; or going up against an Australian company. Or perhaps against an American company or Canadian company. I will use that pitch because we don’t have things like invoicing—we might control the costs of the lab, but we don’t invoice out of it. We’ll produce a schedule and people could create an invoice, but it’s not important to us. Whereas in Britain the best patient centers have got to bring everything together, so that the physician can see a whole range of the tests, maybe going back twenty years. In other countries, it’s today’s test that is important. So we built the system for the National Health Services in Britain, not for a private lab. Although in Britain, we do all the work for BIPA, which is the biggest private hospital group. All nineteen labs use our system.

Frana: Are you looking at exporting the technology?
Watson: We have tried, yes, and we will do so if we can do. Maybe not to America, because we think it is, again, a market with plenty of contenders all trying to eat themselves. But there are certainly other places in the world that look attractive to us.

Frana: This cycle, is that really a prime factor that determines the sector for indigenous high-tech development? Is the start-up rate very low when Americans are trying to export?

Watson: I would think that if the North Americans, Europeans, Australians, South Africans, anybody who’s got a whole market who is looking elsewhere to see where it should go—with Britain being an English-speaking country, it’s very attractive. And with a health service that’s trying to invest, there’s money there for the right system. So yes, in our market sector, you definitely have the ups and downs being forced on us. In other market sectors its economy is more motivated, where in the British textile industry—going the same way as maybe the Americans will go soon because of competition from the Far East—it is driving down the price of a finished garment. In Britain you can’t actually buy yarn for the same price as they make finished cloth in the Far East. That’s the trouble.

America’s got some protections, but in the end, they’re going to suffer the same way as Britain and Europe. Britain has been badly hit because the government has not had a protectionist policy. So a lot of people have been laid off; many, many thousands of those
in textiles. Well, as a consequence, our textile development team, which used to be a
support team of about twelve strong, is now two. We’ve moved people to other sectors.

Frana: So the great growth is really happening in Masterlab?

Watson: Masterlab is now the one we hang our hat on.

Frana: Well this is a nice way to segue into some of these larger questions I have. Are
there incubators here in the universities here in Scotland that helps start-ups?

Watson: I’d say—they would like to have them. The governments over the years have
been trying to get people in universities to work with industry and computers. One of
those schemes is called the ‘TLC’, the ‘Training Learning Company.’ Under TLC a
commercial organization can produce a scheme they want to do, an innovative scheme,
and the university will supply a graduate who will probably go forward for a Master’s or
a more advanced degree. So he’d be studying for his Master’s as well as doing work for
the commercial company. It’s financed in part by the company, by the university, and by
the government, who all chip in money for this.

We have got a scheme, in our Masterlab area for adding “e-type” processes, including
browser, text, and everything else; making the whole application browser-based. It’s not
been done before in our market sector. So we’ve got this TLC scheme running, it’s a two-
year scheme. We’ve got a guy here, he’s been here now six months, and we should have
our first releasable version by the end of this year. We pay so much to him, and being here he is giving a kick-start to other developers because he’ll come with fresher ideas, bold ideas. The universities are pushing as well. They’re in here every month, pushing this, because if this guy is successful they get more money into the universities to subsidize our students. Today in our market sector, we are the only people who have actually done that. But, I think it’s probably worth about £60,000 a year.

Frana: Which university are you working with?

Watson: When we were looking for a university partner, we interviewed Strathclyde University, Glasgow University, and Glasgow Caledonian University. And we decided to go with Glasgow Caledonian University, which is the third one in Glasgow, because the people actually spoke our language a bit better.

Frana: How so?

Watson: It wasn’t so airy-fairy. It was a communication problem with the others. Now, we’re reasonably well qualified, but we knew what we wanted: to achieve a main product. And they were probably trying to sell us something different. We knew what were the areas we were trying to address. Glasgow Caledonian was willing to listen to us.

Frana: And what kind of school is that? What are their strengths?
Watson: Their strengths are pretty broad. They’ve been the third university in Glasgow so they tend to be people who will take on students that are less qualified from school. But they’ve still got a good teaching unit; people who have graduated from Oxford or Cambridge or wherever. And they still have research fellows that they want to develop. They’re probably one that’s striving to be better; more than Glasgow. Glasgow is there, as probably one of the top two or three universities in Britain. And Strathclyde is very close to that, as in Edinburgh. I think Glasgow, Strathclyde, and Edinburgh will probably be in the top ten or fifteen of Britain.

Frana: It’s a remarkable educational environment to work in.

Watson: Scotland’s education is totally different from England. We have a totally different exam structure. And in Scotland a university degree is four years, in England it’s three years. We tend to have in Scotland a more general approach in the beginning; broader courses, both in school and university, before it concentrates.

Frana: That sounds American.

Watson: Probably closer to America than England.

Frana: Do you ever go over and lecture? Do they ask you and your colleagues to give talks?
Watson: Sometimes I have given presentations to health seminars on generalized computing and computer strategy and things; also in textiles.

Frana: Can I ask you about these groups, Scottish Enterprise and Locate in Scotland?

Watson: We are one of the companies Scottish Enterprise has always thought was going to make it. They used to spread out the resources; it used to go to everybody—man or dog. But now they’re being much more selective, and we’re one of those select companies. We have a business, or an account manager within Scottish Enterprise who will come see us every so often and make sure that we’re seeing the opportunities.

Frana: And you find that very helpful?

Watson: Yes, very helpful. I think in Scotland they do it very well—much better than elsewhere. I know some English companies where it would help them to be similarly assisted. Maybe they don’t need a lot of money, but it’s not just money. It’s somebody caring, or saying, ‘I can lend you a person’ for marketing, or something.

Frana: I know your time is very precious, especially on a Friday afternoon. You tell me if I’m a burden on you. I do have some more questions for you.

Watson: No, no, it’s okay.
Frana: Are there groups of venture capitalists here in Scotland?

Watson: In Scotland there are people you can go to if you have a proven product. Given a good idea and business plan they won’t take the control of the company away from you to give you the money. But probably getting money behind you is the most difficult thing you can do. I don’t know if I had decided to do the same thing today, whether it would have been possible without outside finance.

Frana: There wasn’t such a thing as venture capital when you were starting out.

Watson: Oh no, absolutely nothing. We were innocent. We didn’t know what to do, where to do it, and neither did anybody else. I think at the time, when I was at Honeywell, having your own business or writing your own programs in your own business was the dream. This was the dream at the end of the rainbow that nobody achieved.

Frana: People talked about it?

Watson: People talked about how we’d love to do it. But it never happened, for most people. When the Honeywell factory had its 25th anniversary of manufacturing in Scotland—it must have been about ten years ago—I was invited to be there, because of this company. A lot of programmers I worked with at Honeywell were still there. They worked at the mill. They were still working on the programs. I went into the
programming department and had a good talk with everybody. And one of them came up and said to me, ‘You know this program you wrote fifteen years ago? There’s a program error here, can you see it?’ They were still using that program. And that program was written for tapes. And they were now using it with database technology. Crazy.

I think they were still getting job satisfaction where they were. Really, it’s the same satisfaction every day. Nothing seemed to change. They had the one experience a hundred times, where I might have had a hundred experiences once. And that’s the big thing with having your own business: you might not have a boss and director but all your customers are bosses; all your banks are bosses. So you can never say you’re totally out of it.

Frana: I’ve read a bit about Scottish character. Is this how you’re different? They’re more risk averse and you’re not as risk averse? I understand that’s why venture capitalists seem to be stingy, and there’s a perceived ceiling.

Watson: Scotland has quite a small population. Your home market is going to be quite small. If you cannot move out of Scotland, the business won’t succeed—unless you’re building houses or something. But then you have to have an international aspect, whether the international is England. I think, as an American, you have to understand that there is a big difference between Scotland and England. It is like Canada and the United States. It is a different country, a different aspect. A Scot doesn’t mind who beats England at
whatever. We’re not concerned who beats England, as long as England doesn’t win. I
don’t know if that’s the same with America and Canada.

Frana: It’s a strange relationship with Canada because so many Canadians live so close to
the United States border, and so many find work in the U.S. There are endless jokes
about Canada being the fifty-first state, if only we’d let them in. Canada is also a net
exporter of humor—our most famous comedians come from Canada. They do very well
in America because they have a very broad, middle class sense of humor.

Watson: Well, there are probably more Scots living in England than living in Scotland.

Frana: And surely more Scots living in America.

Watson: But I don’t mean of descent. I mean more people born in Scotland live in
England.

Frana: Really? And that’s because of job opportunities?

Watson: That’s because of opportunities. The Southeast of England is very much a
magnet for industry. If you’re talking about the Silicon Glen, there are probably more
computer technology companies within ten miles of London than there are anywhere in
Scotland. I think Scotland benefits from having very good education, and very good
universities, and good graduates that have a work ethic coming into it. I think that’s
attracted a lot of foreign investment here. Because they’re attracted to people that are willing to work.

Frana: Are costs also a factor? Is it cheaper to do business here?

Watson: Cheaper than some parts of England, yes. The Northeast is probably cheaper than Scotland, but maybe it doesn’t have the same education background.

Frana: So the Scots civil engineering tradition lives on in terms of hard work and diligence.

Watson: If you look at the American films and you look at a battleship—or on Star Trek—the engineer speaks in a Scottish accent.

Frana: That really is part of our mythology. The engineer must be Scottish, otherwise—

Watson: —otherwise we’re not going to go at warp speed are we?

Frana: That’s right. What about immigrants into the IT industry here?

Watson: We don’t have that here at Berkeley.

Frana: Is that common?
Watson: I don’t think Scotland is a good area for people to come to. There’s lots of competition. We have hundreds of people out of universities every year with degrees in IT who probably want to stay in Scotland to do that. For somebody coming from India to here, they’re going to have a lot of competitors for not a big market of jobs. I get a lot of people wanting jobs. I probably get somebody asking for a job every day. A lot of them come from Europe, from England. Most of the workers in Scotland want to come here. There is enough talent here.

Frana: It’s not just Glaswegians who want to stay close to home; it’s also Edinburgh and elsewhere in Scotland?

Watson: If they were settled, they would stay here. They might want to move because of the weather, but they’re quite happy to stay here. I’m sure there are parts of America where it’s the same, where there are young people who just continue working or staying in their family location.

Frana: Probably not as true for as many places. In the Twin Cities, however, this is true. People want to live and work and grow up and go to school there, and get their first job and stay. So I understand that culture.

Watson: I have a lot of Indian companies and Indian-American based companies who have said they can supply programmers working in India for a third of the price that we
can supply programmers here. But we don’t use contractors at all. We think it’s bad
practice. We’re looking for long-term employees that can contribute all the skills.

TAPE 3 (Side A)

Frana: Whom do you turn to for legal advice?

Watson: When I set the company up, we used the Bank of Scotland. We also used the
local solicitor around the corner, and we used the accountants fifty yards down the street.
And we still use them, all the same people. Now, the solicitors have become the biggest
commercial lawyers in Scotland. The accountants have merged together. And the Bank of
Scotland, now part of the Halifax Bank of Scotland, is one of the biggest banks in Britain.

So we’ve actually been successful in that I decided that we wanted long-term
relationships with all our suppliers. We don’t chase the money, and we don’t chase the
discounts. We decided that we want a long-term relationship. That meant when the chips
were down in a recession, I went to the bank and said, ‘Listen, I’ve got real problems.’
And they say, ‘How much do you want?’ They know that we’ve always been honest with
them. Same with the solicitors. They know they helped us sell the company; they were
delighted to help us. They’ve possibly made a fortune helping us, but they were delighted
to help us. And the guy, at the end of the day when we signed the papers, was almost in
tears. He’d worked so hard on our behalf. But he knew that the relationship we’d had
would end because we’d have to use the group’s legal facilities. But there is value in long-term relationships. I would always recommend companies do that.

Frana: Have there been unique circumstances where you’ve needed to use the attorneys in software patenting or licensing disputes?

Watson: We might have been quite stupid, but we never copyrighted any of our programs. And we’ve never had a legal dispute where our programs have been the cause of anything. We don’t carry any special insurance against ourselves, or professional liability. We don’t have any of that. And we’ve never been sued, even though we probably do things that make it hard to get insurance. At times we’ve had to consult lawyers in extending our share holding, because at the end of the day we had eighteen of the employees here holding shares. That also drove the company onwards. It wasn’t just a one person share-holding or two people share-holding. We allowed people to get shares so that they knew they were part of the action. Also, if there was somebody who was not an ideal employee we again made sure from a legal point of view, that everything was being done properly, and above board, and honestly with everybody.

Frana: Have other companies had that sort of trouble or is that less of a problem here in Scotland?

Watson: No, there are cases in the papers where companies have deserved what they got. I think if you do run a company properly, then you will get the success. If you try to be a
cheapskate with your employees or clients, then you will get into trouble. I suppose at
times you might be unlucky. But we’ve never had that problem. I’ve even delivered
equipment, hundreds of thousands worth, on a handshake. No paper signed at all. We’ve
got a big chain store called Mackay Stores, and we were the first people to put real-time
point-of-sale into Britain. And we delivered a hundred and fifty thousand pounds worth
of equipment on a handshake. We were honest; they were honest. I think where we said
we wanted a long-term relationship with our suppliers; we also wanted a long-term
relationship with our customers.

Frana: I suppose that saves you money too, and the hassles.

Watson: Yeah, that’s right. That’s not to say we don’t screw up. We do make mistakes,
but we’ve always said to our customers that we’ll be there at the end as meaningfully as
we were there at the beginning.

Frana: Are there any ‘Master’ products that represented serious missteps?

Watson: There probably were, but I can’t actually remember. We did one for forestry
with the biggest forestry management company in Britain—which is basically plant a
forest and watch it grow. But you’ve got to weed it and do all those things so we had
weeding programs and growing programs and nursery projects. There was Masterbuilder,
which was for house builders. I don’t know if you built your house, but here you have
what’s called plot costing. You’ve got the first lift of bricks, the second lift of bricks, the
joinery, the lifting going on; each of those is a fix or a part of the job. And somebody goes through with a tick sheet and ticks what’s happened. You’ve got valuation of the cost and things going up. So we had a system called Masterbuilder that handled all that.

Frana: So why didn’t they work out?

Watson: All these systems at one time were market leaders in their industry, but we couldn’t maintain them because each of them needed the same effort as we put into Masterlab. So we decided that we had to stop being inventive. All these systems we then passed to other people to take over. Some of them are still running. I think the insurance broking system is still running to this day, and we put it in eighteen years ago.

Frana: Were there spin-offs then?

Watson: No, we got other companies that were in that industry and we passed over the client base. I’m sure there are other Master products there, but I wouldn’t know.

Frana: In the Valley, the defense and aerospace industries have been very important in subsidizing the software industry, even today. Has that been true here?

Watson: No. I think there are people who have been very fortunate and got into aerospace type projects and are living quite well in that. We talked earlier about oil-related and extraction of oil software companies for the North Sea industry. We were never that
fortunate in getting into an industry at the right stage. We also worked very much in the commercial, rather than on scientific modeling type things. Looking at the software houses around us now—and most of them are particularly small in Scotland, under ten people—there might be quite a lot and they may have a few clients each, but they will never become world leaders. They might become a force in Scotland, but that’s going nowhere.

Frana: I heard a figure of four or five hundred total.

Watson: Sure, but most of them are small. Probably twenty or thirty of them are reasonably sized.

Frana: Do you have a business round table or anything like that?

Watson: There is a Scottish Software House Federation, which we are not members of because there’s no advantage to us. It was a talk shop. We were one of the people that started it, but really our customer base is not in Scotland, our whole marketing impetus is not in Scotland. Our focus is in one market sector only. Generally, talking about other things is not what we have time for.

Frana: So their interests really aren’t shared.
Watson: They’re not. They are a very successful software federation where people can learn about how to manage a company and how to build business plans, but we’ve done that. We did it long before the Federation was around. It’s not that we don’t want to pass on our experience; we don’t have the time for it. I’m quite happy to sit and talk to people on an ad hoc basis, but I don’t have the time to do it regularly. We, ourselves, will attend trade shows and symposiums on labs. So we will go to laboratory shows and that’s where we’ll show our products. We won’t go to IT shows or computer shows.

Frana. Are there other things that differentiate Scottish software—it sounds like there is such a thing. Do you use any American software?

Watson: I’ve brought systems over here. One of our modules we use within the lab system we actually buy from this software company close to Boston called Data Innovations. We actually went to get the best product in America for it. It’s something that we didn’t write ourselves. They’re very good—they’re like us, in fact. They are single-minded in what they do, and our development team and their development team got on very well.

Scotland has got maybe not a lot of industries here, but it’s got one of each. It’s got, or had, every industry here. If you invented a building contracting system, there might be twenty people you could sell it to at the very most in the whole of Scotland. So you’re not looking at hundreds of opportunities. In America you probably have the opportunity because you have the population depth to get into a vertical market and stay on it. We
didn’t here in Scotland. In Scotland, if you wanted to stay alive, you had to do multiple markets until one of the products was good enough to take elsewhere.

Frana: It sounds to me like one of your mottos is, ‘Don’t spread yourself so thin that you can’t really be the best.’

Watson: There are no prizes for second place.

Frana: Do you have other mottoes?

Watson: I prefer to be last than second. When we’re doing a health system, or selling to National Health Service, the procurement will probably take two years. From a hospital saying, ‘We want to have a system,’ it will take two years to get the system to them. If you’re second, you’ll spend two years effort to get nothing. If you’re last you may only spend three months.

Frana: I see. It’s efficient to lose right away.

Watson: Lose right away—don’t get to the finals and then lose. It’s a waste of time. You might as well lose first. We have regular staff meetings. Socially, every two or three months we will bring alcohol into the office, and at five o’clock time we will have a get-together where people can talk about anything at all. And on a monthly basis all the individual teams have departmental talks. And we have a company briefing once a month
for all the managers together in here, where all the managers will produce reports of how they are getting on. And when we have a business plan, we’ll have a business-planning meeting where the senior managers will actually show the business plan to all the employees before we actually put it into place. Communication is the name of the game.

Frana: So there is some feedback mechanism.

Watson: Yes. We issue a feedback questionnaire for all our staff. Things to write, like, would they recommend this as a place to work. And do they like working here. We put all the hard questions to our own employees. They’re encouraged to tell the truth. We also have a no-blame culture, so people are able to make mistakes knowing that they’re not going to be penalized for life for it. It’s recognized that everybody can make mistakes. If somebody makes the same mistake repeatedly, that’s different.

Frana: Well there’s accountability certainly.

Watson: There’s accountability, but it’s a no-blame culture we’re trying to achieve.

Frana: How do you manage the press then?

Watson: On the laboratory side there is a market information release from an agency in Belgium, though to be honest, that will only report on the European laboratory market: who’s up and who’s down and things. Generally, our own press is non-existent. We’re
very bad at it. As a company we don’t blow our own trumpet; we’re poor at it. But we
know our customers, or who our potential customers are, and those are the people we talk
to. There’s something like three hundred laboratories in the U.K. and they are our main
customers. Every time that we want to communicate, we communicate to every one of
them, so they know what we’re talking about.

Frana: Do you read the trade press then?

Watson: Yes, we will read the laboratory press. We won’t read the IT press, or any of the
computer things at all. We probably look at ourselves as being laboratory people now
more than computer people. I think it’s quite important to be part of the industry you’re
working in, and not see yourself as something special or separate. You’ve got to be
ingrained in there to know what their problems are.

Frana: You’re trying to really look at it from their perspective.

Watson: Yeah. We must have the skills in the area. We probably get more ideas from our
customers: by being there and talking to them, by talking to potential customers. We’ll
pinch any good idea from a competitor; we’ll adapt it and improve it. I think it’s
important to see what your limitations are. In many cases I keep telling people I’m a
trumped-up programmer. That was my key skill.
Frana: I have a friend, who started a company in Austin, and he no longer needs to work anymore, but he started this new company. And he sees himself as the chairman of this really flat organization. Everyone can come to him, and he has thirty or fifty employees. I don’t know how he does it, how he manages it, but it’s an open-door policy and as long as it’s important he’s willing to listen to just about anyone in the company.

Watson: I have an open-door policy as well. Anybody who has a problem or can’t talk to somebody else can quite easily come see me. But we’ve got both a manager level as well that as a group thinks like me—or I’ll change my mind to think like them. A couple of things I now do, I wouldn’t do twenty-five years ago. Wouldn’t know to do them. But you’ve got to definitely trust the managers you appoint. You can’t have everybody reporting to you. That is not efficient. Flat management is the wrong way to go. You’ve got to release some of the reins. You’ve got to trust the managers to manage. They will make mistakes, like you make mistakes. I’ve told everybody in this company that I will make more mistakes than everyone put together, and have done so because I’ve got more mistakes to make. I certainly make more mistakes, but they might be wee ones, I don’t know.

Frana: Does your wife use the system at all in nursing?

Watson: No, but she has seen this system in the hospital, as has my daughter. She’s a physiotherapist. So they’ve both seen the system. In fact, my four children all had temporary holiday jobs here. So they’ve seen the things going, they’ve helped, they know
all the staff here. And a lot of staff has seen them growing up because Gillian is a month younger than this company. So people here remember her as a baby coming up. They have grown up with the company. And when I did a lot of work in textiles I had my wife see what the systems do, because maybe I’ve been called into one of the companies like Pringle, Lyle & Scott, Burberry, or Chanel.

We did a lot of work for Marks & Spencer suppliers. At one time seventy percent of the fabrics that they sold came through our systems somewhere. Our textile systems are still quite integrated with the industry. But the industry here is dying. The last vertical cotton mill knitter in Britain uses our system, the last flax spinner too. Our system produces the yarn from flax and we’ve got other companies that take that yarn and actually produce cloth from it, and then garments.

Frana: That’s a very old industry here.

Watson: In Northern Ireland, there were lots of flax mills, every second building was a mill. So we’ve had a lot to show. The Harris Tweed industry—I don’t know if you know the Harris Tweed industry, but it is a very thick tweed that is made into jackets that would last a hundred years. So we did that on an island off the northwest coast of Scotland, that’s where Harris is, as in Harris and Lewis. It’s all a home-based thing now with handlooms. America is one of the biggest markets for Harris Tweed, because it’s durable.

Frana: So when you started Masterpiece the industry was quite strong.
Watson: The industry was very strong. At one time we probably produced a million meters of fabric a week in our systems.

Frana: So it was a very large sector, at one point, to grow into—much like Masterlab capitalizes on a rapidly growing market.

Watson: Oh, yes. We had lots of customers using our systems. But more than half of them are out of business now. I remember coming to meetings before we got individual contracts, and the financial director would ask me, ‘Peter, how do I know you’re going to be in business next year? We’re a big company, you’re just a two-bit company.’ But a lot of the customers became personal friends, because although we did their computer system a lot of those companies had poor management—especially in textiles because a lot of them were family businesses. Great, great, great granddaddy was a real go-getter, and he was the real mind of the company. And so father-son-father-son, the business was passed along—and by the end of the day, your son that wasn’t very interested in the business anymore, had no real goal for the business, and was managing it very poorly. He was just about asking for somebody to say, ‘Listen, you should do something different.’

Frana: What other uniquenesses are there in doing business here?

Watson: Well, because our clients are quite far apart, driving 900 miles round-trip in a day and seeing a customer between nine and five is not unusual. We’ve all got very
talented at eating food in the car, as we’re doing 95 miles per hour down the motorway. We’re the typical slovenly driver and slovenly eater.

Frana: Other stories you’d care to tell?

Watson: I’ll tell you one from Honeywell. I told you I was in the stock-control system, that’s our finished goods system. There are two or three good stories here from thirty or so years ago. One of them is that they ran out of a component. I looked at the transaction log, and could see that the storeman had issued the wrong component. So I went down to the factory floor and said, “About the computer, it shows that you issued the wrong part.” And the guy looked in the air, and said “Bloody computers, they’re all around” He thought the computer had watched him picking out the wrong component!

Frana: He thought he’d been under surveillance?

Watson: This was long before cameras—you’re talking about the 1970’s. Long before cameras and everything! Another story is that we issued an invoice, it was a foreign invoice, and there was an export charge. Normally it’s a fraction of a percent. And this invoice went out, and in it they had asked for a packet of screws. And they had sent one in an envelope. It should have been a packet, a big drum of screws and he had sent just one screw. And in came the export charge of something like three hundred and sixty pounds. One screw: a pound, export charge—three hundred and sixty pounds, total—three hundred and sixty-one pounds. Now we got the customer complaining that he
hadn’t gotten his bin of screws, just one screw. He hadn’t complained about the export charge! It was absolutely unbelievable. He was complaining about his one screw.

Frana: That was also in Honeywell days?

Watson: That was Honeywell. A third story to tell was when we linked up Australia with New Zealand. We had done the same between Glasgow and Paris. We had a computer in Paris where we could in-batch or transfer the information up and down between Paris and Glasgow. Not without some problems with the Paris GPO or Post Office—the telecommunications company didn’t talk English – I might add. But we put the same system between Auckland and Sydney, and it wasn’t working. So I phoned up New Zealand and complained bitterly that this wasn’t working. And if I could get it working in Glasgow, why wasn’t it working there. And he said, “Well, where is it working?” And I said, “I’ve got it working from here in Glasgow way down to Paris.” And he said, “If you are working from Glasgow way to Bombay in India”—as a sort of distance equivalent—“you might be talking sense.” We were the first people doing commercial communications between the two countries and it was actually dropping the signal, because at that time modems weren’t powerful. Bombay is many thousands of miles from Glasgow and I was talking about a few hundred of miles to Paris.

TAPE 4 (Side A)
Watson: Here’s another one, a paper mill in the early 1980’s. I was called in by the managers to say that the computer was working great during the day, but at night it just seemed to go very slow; just seemed to stop working. This was again a Honeywell Level 6, with twenty or thirty screens on it. So I came up to find out what the problem was. This paper mill was two hundred yards long, with screens up and down it. And I found that all the employees at night were playing this damn tennis game on the terminals. And so it couldn’t actually work the paper mill fast enough because we were actually sending instructions for what paper to make and they were all playing tennis, going up and down!

Frana: And you and the managers had no idea that this—

Watson: —game was going on. And it was only when I was down there that I saw it. Now you’re sitting in front of PCs with gigabytes of memory, but we’re talking about many computers with 8K of memory, all running on a mini-computer. So I went and I took the game off, I deleted the game from the processor. And immediately it got better. I never told the production director anything about it, but he was saying, ‘You’re a magician, you’re a real magician.’ They had no idea that all I did was delete a game off the computer! That was in Aberdeen. Biggest board mill in Britain.

Frana: Any others?

Watson: When mini-computers were starting out we had to work with independent computer consultants a lot. Not used by companies so frequently today, but in the olden
days they were retained by most clients. The consultant would then probably act as a project manager to get more money out of the contract. One year we did work in the fishing industry in Aberdeen. The consultant purposely arranged to have our monthly project meetings on a Wednesday because the fishing fleet was always in, and we went away with this pile of fish; we were always given fresh fish to go home! Another story, this time from the Harris Tweed industry. Every month, at that particular time of the month, we’d have the planning meeting. Well, I went up there one day, and it’s just a wee plane. If you miss the plane, you don’t get there that day. The plane probably takes twenty or thirty people at the very most. Normally there are only two or three people in it. I went this day and it was oddly packed. They were all drinking—this is eight o’clock in the morning, and they are all having their alcohol on the plane. I managed to get in a seat, but I couldn’t understand why there were all these people on the plane. When I arrived all my customers and managers were there at the airport. I said, ‘You didn’t all have to come meet me today.’ And they said, ‘No, Peter, we’re not meeting you, we’re meeting this crowd!’ And this was all a big delegation from this big retail chain, Marks & Spencer, that had come for their annual visit to choose fabric. So I had to make my own way to the first factory, while all these people clambered into cars, and away they went. And going back again, they all got a big salmon wrapped in the same paper they wrapped the cloth in as a going away present. They took pity on me so I got my salmon as well.

Frana: Don Knuth tells me that only two percent of the population make good programmers, and they’re natural programmers. Do you feel that way?
Watson: I don’t know. I’m sure there is a percentage of people who are good programmers, but there must be people with flair, that do it naturally and make top class programmers. I don’t know what that percentage is. People with dyslexia are meant to be very good programmers, envisioning the screen, and game-type areas. I think it depends what they’re programming. I’m sure a lot of people can become good programmers—whether they become the programmers you want, I don’t know. Here, we’ve probably got four or five people on staff that I would put up against any programmer in the world. We’re very lucky that way, that we’ve attracted top-class programmers, not just good programmers.

It’s probably very similar to playing chess. A number of my friends were working on creating chess playing computer programs. You know, a computer will look at thousands of potential moves before it makes one, whereas a good chess player will never even look at most of those moves. He will only look at two or three potential moves instinctively. And that’s where a good programmer can actually produce something very quickly. Look at people who are very accurate programmers who never make a mistake. But are they the best programmers? Or do the best programmers envision something that is unique? They might make a mistake, but it can be fixed.

Frana: And you still program some in COBOL?

Watson: Some of our textile system is still in COBOL. Our laboratory system is now in a fourth-generation language.
Frana: Which one?

Watson: It’s called Libra. It’s one that is produced here in Britain, and which we bought the source for. We now program Libra ourselves. So we’ll go into the generator and change the generator so we can make a new application development easier.

Frana: Peter, I’ve taken too much of your time, but thank you very much for talking to me. It’s been a pleasure.

Watson: Very nice to meet you.

END OF INTERVIEW