An Interview with

ROB ROBERTSON

OH 443

Conducted by Thomas J. Misa

on

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Control Data Corporation History Project

Melbourne, Australia

Rob Robertson Interview

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Oral History 443

Abstract

In November 2013, CBI director Tom Misa conducted a series of oral history interviews with 13 former employees of Control Data Australia (1963-89) including the details of each person's career, before and after working for Control Data. Topics that are common to many of the interviews include Trevor Robinson's key role in organizing Control Data Australia; the early computer sales in Australia to the Bureau of Census and Statistics, Department of Defence, Postmaster General, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Bureau of Meteorology, and several prominent Australian universities. Control Data Australia did business data processing for such large concerns as Broken Hill Proprietary (BHP), Telstra, and others. A distinctive emphasis was its work in developing computer systems for race-track betting for the state of Victoria's Totalisator Agency Board (TAB) as well as for other Australian states and New Zealand. Other topics include relations with Control Data's headquarters in Minneapolis, business data processing, data centers, database management, networking and Cybernet, and projects done in several Far East countries.

Interviews were conducted with Richard Bament, John Baxter, Ron G. Bird, Tony Blackmore, Lyle Bowden, Marcel Dayan, Ian Downie, Julie James, George Karoly, John O'Neil, Garry Pearce, Rob Robertson, and Bruce Wilson.

Misa: It's the 19th of November 2013. My name is Tom Misa. I'm in Melbourne, Australia, talking this evening with Rob Robertson. Our main focus will be on Rob's years with Control Data Australia, 1966 to 1984. Rob, just to start, can you say a bit about your background and how you got interested in the computing field?

Robertson: Sure. I started off by doing a science degree at Adelaide University, specializing in physics and applied mathematics. I really didn't like it, I was bored, as a result I didn't do terribly well. So, my introduction to computing was really a kind of strange event at the end of my university career; well, my science degree. We went out to celebrate the end of the year, a group of us, and we went to a bar and we were sitting and drinking and talking. Not drinking very much. And there was this guy sitting on his own; big, charismatic-looking guy with a beard; rather frightening looking individual sitting, drinking double scotches. And gradually, over the period of an hour or two, we started to talk to him and he turned out to be pretty interesting sort of a guy. And the group that I was with drifted away and I found myself just on my own talking to this guy. We talked about all kinds of things, and finally, he said to me — he, for some reason, started calling me Robbie [which, as a result, was a name that stuck with me right through my Control Data career].

Misa: Took you under his wing, or something.

Robertson: . . . and he said, "So what are you going to do with your life?" And I said, "I have no idea." And he said, "Well, I think you should get into computers," and he said, "I

think you might have it." And so I was totally mystified by this. He said, "Come and see me in the morning; I'm in the Computing Science Department of Adelaide University, and we'll talk about it." So I very tentatively appeared in the Computing Science Department the next morning, thinking, "Well that guy was drinking an awful lot of double scotches. He's probably not going to have the faintest idea who I am." I walked in and I spoke to the secretary, and I said I'm looking for John Ovenstone (because he'd given me his name). She said, "Oh, you must be Robbie." [Laughs.]

[Robertson adds: John Ovenstone was a pioneer or the Australian computer industry, developed a close relationship with various Control Data people including Trevor Robinson and Bob Price, and was a major factor in Control Data's success in the Australian market.]

Misa: Must be Robbie!

Robertson: "Go straight in — the Prof is waiting for you." We hadn't arranged a time or anything, so I just walked into his office, and he looked at me and said, "Now, Robbie, I've been thinking about this. What I think we should do is depending on your exam results — which hadn't come out at that stage — if you do well, then I think we'll take you on and have you do an Honours degree. If you haven't done so well, that's going to be a problem doing Honours. What I can do is put you into a Diploma course, which is a one-year course, and then from there on, we can talk about what you do from there. If you do okay, you could go on and do a Master's degree, and we could look at you doing it part time — perhaps working in the Computing Centre. In the meantime, what I

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suggest is I'll take you on as a trainee programmer over the Christmas vacation, and see how you go. Can you start tomorrow?" So I did. [Laughs.]

Misa: Okay. So the door opens and you walk through it. He had a . . .

Robertson: … huge capacity for whiskey; he certainly wasn't in any way majorly intoxicated the night before. But I was a bit taken aback by this whole thing so I went home and talked to my parents. But I was starting as a trainee programmer the next day. And I did.

Misa: Now, that was not so common then, a traineeship in the computing field?

Robertson: It wasn't all that common, and certainly getting offered a job in a bar at the first meeting was, I don't think, very common at all, but it happened to me. So basically, I entered the computing industry because I met a guy in a bar and he offered me a job. And he became my mentor over the next four years. He was a very charismatic, forceful sort of a guy; huge knowledge of computing. He ran the Computing Science Department and he also ran a computing bureau on behalf of the university. So I did the diploma; I did very well because I was now motivated and I then enrolled for a Master's degree, which I was doing part time, and he employed me part time on the staff for the next four years.

Misa: Is this 1966 to . . .?

Robertson: 1966 to 1969, so the end of 1969. So, I didn't complete the master's degree because I found myself falling between two disciplines. I got to the stage of writing up the thesis, realized that there wasn't enough innovative computing in it. It was actually computing applied to anthropology, studying the marriage laws of the Northern Territory aboriginals, using computer techniques. And it was very difficult; in those days there were very few anthropologists in Australia, and there was no department in Adelaide University. So I wasn't getting recognition from the anthropologists, and didn't have enough original computing to make it a Computer Science Master's. I thought that was the case. So I went and saw John Ovenstone, who was my supervisor for my research project, and said, "I'm having this difficulty." And he said, "If you're unhappy with this, I can get you a terrific job at Control Data." So I said, "Well, maybe that's what I need to do." So that's how I joined Control Data. I had, in fact, already been interviewed by Control Data, along with four or five other people in the Computing Science Department — we were all interviewed by Control Data about halfway through 1969, because the Cybernet Data Services operation was opening up in Australia at that time. At that stage, it was independent — pretty much independent — of Control Data Australia. It was Control Data Corporation Cybernet Services, reporting back directly to Minneapolis, and it was just a courtesy communication between Control Data Australia and Cybernet. And so they were looking for people.

Misa: So, Cybernet was more directly connected to Minneapolis than to CDA?

Robertson: Yes, at that time. There was a reason that they were interested in us. In 1966, Adelaide University managed to get funding to buy the first Control Data 6000 series computer, a 6400. And this was, again, a major coup by Ovenstone, who was very creative in organizing funding, and he managed to get funding from all sorts of sources — convinced the university they should spend far more than any other university had ever thought about spending on the biggest computer in Australia, the most powerful computer.

Misa: The 6400 was a pretty impressive machine.

Robertson: It was certainly the most powerful machine of any brand in Australia at the time. So, we'd all had experience on the 6000 series computers and we were the only people in the country that had a knowledge of the 6000 computers. Cybernet Data Services was planning to put a 6600 into Sydney and they were looking for people that had 6000 series skills, so they just . . .

Misa: Scooped you guys up.

Robertson: They didn't scoop me up immediately because I still wasn't sure whether I'd try and finish this Master's degree. So I was attempting to write at night, sleeping in the day, and then would start work again around lunch time. And I was in the shower about midday one day, and there was a knock on the bathroom window. The shower was over the bath, the bath was right next to the window, and it was a guy [David Haycraft] from

Control Data who said — and I was still in the shower — he said to me, "Mr. Reed from Control Data wonders if you would like a job from Control Data." And I was a bit taken aback, so I said, "Yeah, okay." He then said, "Mr. Reed wonders if you could go to Minneapolis next week." So I said, "Okay." "Mr. Reed wonders if you could go to Melbourne tomorrow for a meeting." "Okay." I then realized that I hadn't consulted my wife on this — she had no idea of this. So when she got home I said, "I've just done something very strange. I've just accepted a job with a computer company and I have to go to Melbourne tomorrow, and I have to go to Minneapolis next week, and we have to move to Sydney. And I think I'll be in Minneapolis for one or two weeks, can you move us all to Sydney while I'm doing this?" [Laughs.] So she said, "Okay."

Misa: Sydney was where Cybernet was?

Robertson: That was where Cybernet was putting its 6600 in.

Misa: I've heard several people say that, oftentimes, your first assignment was to come to Minneapolis. So it wasn't as uncommon as you might think.

Robertson: There were two reasons why Control Data made me the offer. One was that I had the 6000 series knowledge. The second reason was that I had had some experience in linear programming, and Cybernet was looking at a major contract with BP [British Petroleum] to do oil refinery scheduling. And it was a massive linear programming exercise, and they didn't have anyone that knew anything about linear programming in

Australia. And so they heard from Ovenstone that I had dabbled in it; I really had only dabbled in it, so I didn't know a huge amount about it. The reason they wanted me to go to Melbourne the following day was to have a meeting with BP to convince them we should be considered for this contract.

Misa: And here you were the evidence at hand . . .

Robertson: I was the evidence at hand, and I was to collect up all their data, take it to Minneapolis, and run benchmarks in Minneapolis and prove that we could run their refinery scheduling model faster than anybody else in Australia. So, you can imagine how I was pretty nervous about this, because I really didn't know what I was getting into.

Misa: And at the time, the 6600 was a machine, I gather, that had a certain aura about it.

Robertson: It was, yes.

Misa: It was the world's fastest computer, you know, IBM contested it with Stretch, but it was really something of a machine. And here you are going off to Minneapolis to get this contract on this supercomputer.

Robertson: That's right. There was another service bureau company that opened up in Sydney just about a kilometer away from Cybernet to do exactly the same sort of servicing. And they opened up in the same month and they were also competing for that

business. I forget the name of the company [Compunet], but it was shortly after taken over by Computer Sciences, and they continued to run it for many years. We were competing with them, and we were also competing with IBM, and there were a couple of others that really weren't in the race. And so I turned up in Melbourne, flew into Melbourne; was met by David McAdam, the new Analytical Services Manager for Cybernet, who'd just been appointed, and Roy Goldman, the Melbourne sales rep for Cybernet, who'd just been appointed. They met me at the airport very nervously and said that, because nobody [from Cybernet] had met me, nobody knew what they were getting into. I met them, and they visibly heaved a sigh of relief when I got off the plane because — I was wearing a suit, I had a tie on, I had a short haircut.

Misa: It looked like you were very respectable.

Robertson: They admitted that they had — this may have been a made-up story — but they said later that they had a pair of scissors in the trunk of the car so that they could give me a haircut on the way to BP, if necessary. So anyway, we all very nervously headed up to BP, went up in the elevator. The meeting was in the boardroom on the top floor — it's the building just down St. Kilda Road there on the 20th floor. I drove past it [on the way here tonight] and I counted the number of floors to make sure. And we nervously walked into the boardroom to meet the linear programming guru for BP; and he looked at me and he said, "G'day, Rob"; stuck out his hand; shook it — because I'd been at high school with him — and from there on, it was easy.

Misa: It was somebody that you actually had known.

Robertson: Yes. So that was how I came to join Control Data.

Misa: How did it happen that you had experience in linear programming?

Robertson: When I was casting around to work out what I was going to do for the Master's degree, one of the projects that was suggested to me was a linear programming project. Adelaide University — Ovenstone — had got approval for the funding on the condition that he would set up a bureau and sell his services outside the university. And so they were trying to build a market for linear programming in South Australia, and I got involved in that. We did a little bit of linear programming work. I decided it wasn't what I wanted to do the Master's on, but I did have some experience.

Misa: You had some background from that.

Robertson: So I flew to Minneapolis; spent two weeks in Minneapolis running benchmarks with the linear programming guys in Minneapolis. They were one of a couple of groups that were specializing in linear programming [Bill Paradis's OPHELIE group]. Got the benchmark running and we were pretty sure that it was going to run much faster than anything else anybody else was going to throw at us. I brought it back to Sydney. By that stage my wife had moved there to Sydney, and settled in, and we signed a contract and set about doing that process.

Misa: So what was it like you coming from Adelaide to land in Minneapolis, at the time?

Robertson: My first impression was it was dark. I arrived about 10 o'clock at night; it was November; I rented a Volkswagen because that was what I was driving at home and I knew that I had to drive on the wrong side of the road and I figured at least I'd drive a car that I understood. Drove to Howard Johnson's down on 494 and 100, I think, or thereabouts; checked in; got up the next morning, went to have breakfast in the coffee shop, and my impression then was it was all white. It was the first snowfall of the year and I was sitting there in the coffee shop, and outside the window was the exit ramp from the freeway, from 494. And nobody had snow tires on, it was the first snowfall of the year, and it was mayhem. I was sitting there watching all these cars; there were traffic lights at the bottom of the ramp; all these cars were crashing into each other. There was one car right in front of me that came down, put his foot on the brake and spun around completely and ended up facing that havoc. And I had to go out and drive. [Laughs.] Never driven in snow before. So that was my first impression of Minneapolis.

I love Minneapolis; I loved it in winter. I had two weeks there, then; I had three months there, later; and the people were friendly and helpful and the guys that I was working with in the linear programming group were great. Every night, got to see a little bit of the city and surrounds here and there, driving to and from work mostly. And then went back and settled into Sydney. Which wasn't a major problem. I'd lived in Sydney as a kid, growing up in Sydney before I moved to Adelaide.

Misa: So, I take it then that the BP contract went through successfully.

Robertson: Contract went through successfully and so I was involved in supporting that. We ran that as a regular repeat business for some years after that.

Misa: Was there already a 6600 in Sydney?

Robertson: A 6600 had arrived a month or two before I got there. It was still being set up. It was brand new and three or four others came from Adelaide University, there were a couple of guys from Minneapolis and between us, we got it going and supported it. And they had a new sales staff that was out selling services. So it was a whole brand new team, basically; management; the Director of Cybernet Data Services was from Minneapolis. He was a guy from the U.S., I think growing up in Minneapolis. The rest were Australians.

Misa: So it connected mostly to Minneapolis, rather than to Control Data Australia.

Robertson: Yes. The guy in charge was Dick Ernst and he reported directly to somebody in Minneapolis. Of course there was friction because Control Data Australia had been in operation for some years and they couldn't understand why this new group came in and were a law unto themselves. Dick and Trevor Robinson got on reasonably well, but it was, as I said before, a courtesy communication. And about that time, Trevor left the

company anyway, and I think he'd been partly instrumental in setting up, Cybernet Services.

Misa: He left CDA about 1970.

Robertson: Just after 1969, I moved over there. I never met him at that stage. I knew of him because his mail and my mail used to get confused because Robinson and Robertson was too hard for the company and I started getting things addressed to this guy, Robinson. And I didn't really know who he was because I wasn't really working for him at that stage. I met him and became friends with him years later when he returned to Control Data. So anyway, I worked with Cybernet Services for three years, I think, and I was partly doing the linear programming stuff and I was doing a lot of support of technical programs. I was also supervising a small group of support analysts, applications analysts we called them, who were supporting a variety of packages.

Misa: Was your job mostly a managerial one or were you actually doing programming?

Robertson: Mostly technical, but with a sort of supervisory role, reporting to David McAdam, the Manager of Analytical Services, who was one of the Australians that had been appointed when the 6600 came in.

Misa: In the document you prepared, you ended up moving in 1972 to Control Data Australia.

Robertson: Correct.

Misa: To Computer Systems Sales Support, and that was in a supervisory role.

Robertson: That was in a supervisory role. Also I was asked if I would consider moving out of Cybernet Services and getting involved in assisting in selling Cybers. Well, particularly Cybers — other equipment, as well — but the focus was on selling Cybers into sites in Australia. So that became a sales support role. There were three of us, and at times, four of us involved in that. And I guess the major thing that we did in that role is we — I and another technical guy [Peter Fitzmaurice] — introduced the KRONOS operating system to Australia. By this stage there were a couple of Cybers around. Melbourne University had bought one. I think the University of Western Australia had bought one at this stage. But they were running the SCOPE operating system, which was the major operating system and there was this other strange operating system [KRONOS] that had been developed as a skunk works, you know — "behind closed doors" operating system.

Misa: It would do time sharing, though.

Robertson: It would do time sharing. That was KRONOS. And so there was a big discussion about whether KRONOS should be allowed into the country but it became clear that the contracts that we were looking at — and the two ones that we were

specifically looking at were Sydney University and the University of New South Wales
— both wanted big time sharing systems. It became apparent that SCOPE wasn't going
to handle the load. So we set about learning what KRONOS was, bringing it in, doing
benchmarks, running test, producing papers on the performance of KRONOS with
varying numbers of terminals — 30, 50, 100 terminals — and trying to convince, first of
all, Control Data Australia, and secondly the [sales] prospects that this was the way to go
for this kind of application.

Misa: SCOPE could take some level of time sharing?

Robertson: Some level but it was really, in those days, we were really talking about a
maximum of about 30 concurrent users, and it would start to struggle at that stage. It was
excellent for processing of large scientific and engineering applications.

Misa: Do you remember how you got KRONOS? I mean, physically did it come as a
tape?

Robertson: Physically, it came as a tape. It came as a tape and we also brought a girl [Pat
Aikman] out who was a KRONOS expert from Montreal. She was the site support person
at what was then Sir George Williams University, now Concordia. We brought her out
for two weeks to teach me and to teach Peter Fitzmaurice, the other guy that I was
working with, and to help run us these tests, again, every night, all night. So, it was Pat
Aikman and I sat up every night simulating different loads of terminals over and over

again, getting statistics, producing reports, presenting them to Sydney University at that stage — primarily. We got to the point where Sydney University said they were definitely interested but they wanted more tests run, and they wanted them run on the computer that they would be installing, which was now a Cyber, because 6000s were being replaced by the Cyber 70 range. So I was sent to Minneapolis for one week, possibly to be extended to two weeks, to run these benchmarks. I came back three months later. [Laughs.]

Misa: Three months.

Robertson: Through a number of different circumstances. I ran the tests for Sydney University, again taking over the computer in the benchmark center in the Mod C Building of Control Data every night. I would take it over from about nine at night to six in the morning; and I would run these tests. Now the tests consisted of multiple simulated terminals, up to about 120; two live terminals where I had to time the responses into these terminal sessions, and time the responses with a stopwatch, and record the times. I had two printers printing full speed, continuously; and had the card reader reading cards continuously. Well, the card reader and the printers were down the other end of the computer room; the computer was in the middle; but the terminals that I had to time the responses on were up the other end. As soon as I started timing the responses the printer would run out of paper or the card reader would run out of cards and I'd have to run back and load them again. I ended up taking my shoes off so I could get better traction, so I could run backwards and forwards up and down the computer room. The thing that stands

out in my mind was the card reader. If you were too quick, it would jam and that would shred all the cards and concertina them and throw them all over the floor. Because I couldn't afford to do anything but just throw more cards at it, I'd just leave them on the floor, load up another box of cards, and let it run. And I remember one morning I was standing knee deep in concertina'd cards, and the guy that had the next shift walked in and he looked at me and he said, "My God, what a total disaster!" And I said, "It's all right, they're all blank." [Laughs.] He obviously assumed that this was some major program that had just been destroyed.

Misa: You could reconstruct it but that would take a great deal of time.

Robertson: So, we successfully ran the results. Sydney University was pleased. I said, "Can I come home now?" They said, "No" — Control Data said, "No, we've got a guy [John Hill] coming over who is the sales rep for the Department of Defence, and he has to travel around and visit defense establishments in the U.S. and talk about computer technology. And we need a technical guy to travel with him, to keep him 'honest' and to interpret for him. It turned out that this was fairly useless because it was all defense and secure; I didn't have a security clearance. He did. So my support tended to consist of my sitting in Reception while he was taken off to talk to the defense guys, and then he would come out and say, "Well, that was interesting." And I'd say to him, "What did you learn?" And he'd say, "I can't tell you."

Misa: Of course.

Robertson: Anyway, he and I got along pretty well. We traveled around for several weeks; and we went to Sunnyvale, California; we went to Minneapolis; we were due to go to a couple of other sites in the East Coast. And I got a call to say, "The technical guy from Sydney University would like to come to Minneapolis and see these benchmarks run on the computer that they're going to buy …"

Misa: They were really [inaudible]

Robertson: "… could I get back to Minneapolis?"

Misa: They really wanted this to go right. The timesharing was a really tough application . . .

Robertson: Oh yes.

Misa. . . especially for a big university.

Robertson: This was real pioneering for Australia. Nobody was doing that in Australia, or had thought it was possible. So, now I had to go out to California; meet Bruce Haddon, the guy from Sydney University; take him to several sites. So we went to the Cybernet Data Center in Palo Alto. We then went to Minneapolis; I demonstrated the benchmark to him; he was happy with that; he signed off on that. And then Sydney University

suggested he go and visit some other sites in Europe — KRONOS sites; would I travel with him? So I ended up traveling with him to London, to Imperial College in London, to look at KRONOS operating there. That was interesting because in London, there was a guy called Greg Mansfield — and Greg Mansfield actually invented KRONOS. Well, he didn't invent KRONOS as such — he was a computer engineer and he developed an operating system that engineers could use for testing and maintenance. It was called MACE. But it was basically the forerunner of KRONOS, and KRONOS was built on it. So one of the important things was to meet Greg Mansfield, then doing a Ph.D. at Imperial College — so we met him. We went to Paris to talk to the installation in Paris. We were then asked if we could please go to Rome and find a site in Rome because the guy that was the senior; the Director of the Computer Center at Sydney University, had trained as a priest; had been a very talented organist, and had played the organ in the Vatican for a period. And he was very keen that this technical guy [Bruce] who worked for him should see Rome. Well, we couldn't find a site in Rome that was running KRONOS. So in the end, it was decided we'll go to Rome anyway. So he and I had a couple of days in Rome, and then we flew back around the world. So I arrived back three months later.

Misa: Was that normal for a university contemplating a major system, to do this full court press? Control Data really made sure that it wasn't merely a salesman's promise but having site visits at more than one site, on and on and on.

Robertson: I think it was moderately common, to a greater or lesser extent in the United States. I missed out one step — to Minneapolis, because in the middle of this, the University of New South Wales decided that they would like to run some benchmarks, and they agreed with Sydney University that they could take their benchmarks — but they wanted to do different numbers of terminals, and different amounts of memory in the machine. I had to go back to Minneapolis again — rewrote all the benchmarks for a different university, with different configurations. I think that was another two weeks, of the three months. So that was my 'round the world trip for three months.

There was one thing that I mentioned to you. I don't know whether you want to deal with it now, but in the course of that trip, we managed to get into NASA Ames by just walking through their security.

Misa: We didn't record the story.

Robertson: I don't know whether we can. [Laughs.]

Misa: I bet it'd be safe now.

Robertson: Probably would be. The story was that this guy, Bruce Haddon, from Sydney University — when we got to California, we took him to Sunnyvale, which is the Control Data development establishment in California. We took him to Palo Alto Data Center to see systems running, Cybers running. And I said to him, "Is there anything else you'd like to do?" We actually had a Control Data customer relations guy traveling with us, so

there were three of us: the Sydney University guy, the customer relations guy who was based on the West Coast, and me. So he and I said to Bruce, "Is there anything else you'd like to do while you're here?" And Bruce said, "I'd really like to see ILLIAC IV."

Misa: Oh, the famous ILLIAC IV.

Robertson: I didn't know much about ILLIAC IV but the Control Data guy said, "I think it's impossible. Nobody could see ILLIAC IV — it's totally a secure site. It's the hub of the ARPANET. Nobody gets to see it." Bruce said, "Well, I'm very disappointed about that." And ILLIAC IV had been at the University of Illinois, but because of student unrest and revolts in various places, I understand that Defense considered that it was too vulnerable, so they moved it out to NASA Ames, a secure site.

Misa: I'll tell you a back story when we're done with this. I talked with somebody who was at Illinois [i.e. John Day]; it's a great story.

Robertson: "Bruce," we said, "Well, we can't organize that." Bruce said, "I might be able to; I've got a friend who's doing a Ph.D. and he's working on ILLIAC IV." He was an Australian that was at Stanford. And he said, "I'll contact him and see what he can do." So he called Tim; Tim said he'd never seen ILLIAC IV, he was working on it but he was working remotely, he didn't have access. But he said, "I have a friend who has a security clearance, and he could get access; we might be able to arrange something." So Tim comes out with his friend Dave, and Dave said, "Yeah, sure, no problem." So we

had a big Ford LTD rental car that I was driving, and we arranged for the three of us to pick up Tim from Stanford, and then pick up this other guy, Dave, who had the pass. So we picked up Tim, we picked up Dave. Dave, who had the pass, was the ultimate revolutionary. He got in the car — he was wearing baggy shorts, a dirty old t-shirt, he had a long beard down to his waist, and sandals. As we drove to the Ames gate, he explained to us that he had the pass but because he was a pacifist he didn't believe in using it. So he just drove through. So he briefed me. He said, "Now, when you get to the gate there will be an armed guard. Just drive straight through." So we drove up to the gate, this guy came out, and he had some sort of machine gun in his hand — it was a huge thing, whatever it was — and he put up his hand to stop us. I started to slow down and Dave said, "Drive on, drive on!" So, I speeded up, drove on — drove straight past this guy. Dave said, "Now drive over to that building, park, everybody get out, walk over to that door and don't look back."

Misa: Just assume that you were to be there.

Robertson: Yes. So we're out of the car and we walked on, and I think it was the longest walk I've ever done; it seemed like 15 kilometers and my legs had turned to jelly because there was this guy behind me and, as far as I knew, trying to decide whether he was going to shoot me or not. So I stumbled to this door, and this is the entrance to the ILLIAC IV establishment. There was a desk inside, and a man at the desk said to us — there were five of us — "Would you sign in please?" "No, no, that's all right," said Dave; and we walked straight into the computer room. There was the ILLIAC IV. There was computer

peripheral equipment you just wouldn't believe — a lot of it was Digital Equipment

Corporation and Burroughs gear that had never been announced. There were disks, and

drums, and communications equipment that didn't appear on the open market for at least

12 months after that. Because we were in there, nobody questioned us, so we wandered

around for something like two hours, talking to the technicians.

Misa: Wow.

Robertson: [Laughs.] Walked out again, drove off. I still cannot believe it. [pause]

Misa: ILLIAC IV was huge.

Robertson: It was huge, it was like a freight train — it was just this big, long bank of

computer, with lots of other stuff.

Misa: Big.

Robertson: So that was my [pause]

Misa: I hope you got lots of stories from this episode because it's very unusual.

Robertson: I don't think you could do that today. I think the security is probably a bit

better. But it was just extraordinary.

Misa: Yes.

Robertson: So that was my three months' tour around the world. We wrapped up both Sydney University and the University of New South Wales, and shortly after that, as they were being installed, I was offered the position of Professional Services Manager in Adelaide, South Australia. So we moved back to Adelaide.

Misa: And that was Professional Services Manager, 1974-77?

Robertson: 1974-77. The Adelaide office in South Australia [was] small. Adelaide was a population of about a million people and Control Data had been extremely successful. Obviously, they started with the 6400 that Ovenstone bought for the University. They'd also sold a couple of CDC 1700 systems to do pathology laboratory testing, one for the Institute of Medical and Veterinary Science, which was affiliated with the Royal Adelaide Hospital. The Institute of Medical and Veterinary Science developed software that they then installed in other 1700s in other hospitals around Adelaide. So we had the 6400, several 1700 sites, we also had processing going on at CSIRO because they had a 3200. CSIRO had a network of 3000 series computers, with a hub in Canberra; and a 3200 in each capital city. So that was there; and there was some computer processing for the state government, but about the time that I moved to Adelaide, the state government decided to buy Control Data Cybers, so they had very big Cyber installation. When I got there, the big marketing activity was to sell a computer to the South Australian Institute

of Technology, which was effectively the second university in Adelaide. Again, a KRONOS system, and because of my KRONOS expertise I was able to not only have a supervisory or management role, but also get involved technically and bring some of the other guys up to speed on that. We had a lot of stiff competition at the South Australian Institute of Technology because at that time Digital Equipment Corporation was coming out with the VAX 11/780 and there was a lot of support for the VAX within the university. The Head of Computing Science, who was also Director of the Computer Centre, didn't believe that the VAX was capable of handling the workload, but he was having great difficulty convincing his staff and other academics that that was the case.

Misa: They really liked those high end VAX machines.

Robertson: Academics loved them. And so we did actually sell that computer but it was always troublesome because there was always this feeling that maybe they should've got a VAX, just because they liked the concept of the VAX. So we had to put a lot of work into supporting that machine. One other thing that had happened was the guy that was the Sales Manager [Branch Manager] in Adelaide, was this guy, Roy Archibald, who was also extremely entrepreneurial, and he opened up Western Australia for Control Data. So Western Australia and South Australia were run out of Adelaide.

Misa: Opening up, that is opening as an area where CDA was very active.

Robertson: Yes. So Roy had successfully picked up an order for a Cyber from the University of Western Australia. He'd also picked up an order for a Cyber from the Western Australia Medical Department, to run the WA hospitals. And this was based on software that was partly developed in Australia, and partly developed by Control Data software group in La Jolla, California. So I had a team of four people in Western Australia supporting both sites, and along the way we picked up another site, which was for Western Mining Corporation, now part of BHP, I think — a major mining company at the time. And later, another system for the Department of Main Roads. So I had a team in Western Australia, at one stage, about six people, and I had something like eight or 10 people in South Australia, supporting South Australian operations. That number gradually ran down because Control Data's policy became to minimize the amount of onsite support that was provided, in order to reduce the cost of support. So we were trying to sell the services of these people to other companies as consultants, rather than just show them the door.

Misa: The traditional model was, basically, when you sold a big computer, you also had somebody that would come for six months, or 12 months, or whatever the agreement would be, and be an onsite expert. But Control Data was trying to wean itself from that because it was expensive.

Robertson: Yes. And that happened just as I took over this job in Adelaide — so that was a bit nerve wracking for me because I was trying to maintain morale of the people that were there, while at the same time knowing that the overall plan was to reduce the

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number of people. I knew that too, so I was trying to find other consulting work that would keep them busy. I was able to do some, but gradually, that number reduced in both South Australia and Western Australia — which meant that I wasn't particularly comfortable in that role — because I liked the guys. But I did like working with the sales people in South Australia and Western Australia. They were very creative. Roy Archibald, about the time that I moved out there, moved to Melbourne as the National Computer System Sales Manager, and his role as the sales guy in Adelaide was taken by Rob Hain — my predecessor, the guy that had been the support manager. So I stepped into his shoes, and he took over the sales role.

Misa: Can I just make a comment? The people that Archibald was signing up; well, the universities could be considered a classic Control Data customer, but the mining company, the Department of Main Roads — those are all things outside traditional scientific computing . . .

Robertson: They were.

Misa: . . . like commercial.

Robertson: The one that was most commercial was the South Australian government, South Australian Public Service Board, which was a very big installation and they were basically commercial. They were a major factor, for example, in the Australian Taxation Office buying Cybers later on in Canberra, because they were aware that this was

happening. Western Mining was more technical because it was technical mining stuff, although they were doing a lot of administration. Main Roads Department was doing a lot of administration, some technical work; and the Western Australian Medical Department was very much non Control Data-traditional computing. One major project we did was develop a payroll system for all staff in all hospitals in Western Australia. It was a massive task because you've got everything from cleaners to doctors, with all kinds of shifts, and award payments, and so on. And that was definitely not a classical Control Data application. So, yes, that was a three-year effort or so. And then Rob Hain, the Branch Manager in Adelaide moved to New Zealand to become Country Manager in New Zealand, and I was offered his job which, after a bit of soul searching, I decided to take.

Misa: That would involve more supervisory functions?

Robertson: Branch manager was running the branch, taking total overall responsibility for the branch, but also was the sole sales guy there — so I had a quota.

Misa: The *sole* sales person there.

Robertson: Yes — so I had a quota of somewhere between one and two million — varied from year to year. We ran the branch as a sort of democratic committee. Geoff Ellis, the Engineering Services Manager; Steve Davies, the Professional Services Supervisor, who took over what I'd been doing (but at a lower level, because we had less

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staff by that stage) and I ran it as a committee of which I was sort of the senior person because everything hinged on sales, and if we didn't sell then there was no business — so I was looked on as the senior guy if there was a decision to be made. But basically we ran it as a committee, and it worked pretty well.

Misa: Your work before had involved sales support but not actually being the sales person.

Robertson: Correct. So I was pretty close to the sales but I hadn't carried a quota, I was supporting the sales guy.

Misa: So it was quite a shift in your responsibilities and outlook, I suppose.

Robertson: It was. And this was why I didn't take the job at first; I did quite a lot of soul searching before I decided that that was what I wanted to do. And I'm probably not a good salesman. I'm not that pushy sort of sales guy that finds closing business easy but I did know the business in South Australia by that stage. I knew the people. I knew the customers and, because I'd lived in Adelaide before and it's a small town, I knew a lot of people and I had a lot of contacts.

Misa: Did you end up doing sales training at all?

Robertson: Oh, yes. There was continuous and, I think doing sales training as a sales support guy, because we got involved in that, so I'd had continuous sales training — and there was a lot of sales training going on in the company. So yes, I did a fair bit of that. And I was moderately successful, although one of the issues was that about that time, Cybers were starting to look a bit "old hat." VAX 11/790 had come in — there was other stuff around; Burroughs was making a lot of noise about new technology that didn't necessarily work very well, but it looked good on paper. And we were having a lot of difficulty moving new Cybers, so a lot of my success was really add-on business and replacement of older machines with newer machines — helped along the way a little with a few odd things. I recall got a phone call one Friday night, late, to say could we arrange for some engineers to go into the South Australian Public Service Centre because they'd just poured water all over their computer. So we said, "Yes, sure, we could do that" — sent them off with hair dryers, and so on. Then we got another call saying, "Could you ask your engineers to be a bit careful because it's not water, it's acid." And what had happened was the computer room was very old, and for some unknown reason they put all the water pipes through the ceiling rather than under the floor. Now, Adelaide has very bad water, it's very high in mineral content. All the water pipes develop a sediment, whatever you call it, growth from the minerals in the water and they gradually seize up. The Public Service of South Australian government's policy was to pump acid through the water pipes to clear them of this residue.

Misa: From a chemical laboratory, makes perfect sense, though for a computer facility, maybe not.

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Robertson: Yes. But the pipes were old; they burst — and not the mainframe — but a large amount of peripheral equipment was doused in what we were told was sulphamic acid, and could we please work out what we could do about this. Well what we would do — in those days we were using telex exchange, and we were using telexes frantically back and forth to Minneapolis over the weekend, saying, "What do we do? What's the answer to a whole lot of very large equipment — big boxes — doused in sulphamic acid?" And the answer was, "You could get a crane, a very big bath of caustic soda, lift the boxes in and put them into the caustic soda and soak them." However, you'd have to have done that within about half an hour of the spill, so it was already lost. Half of my quota for the year was achieved with that because it was a total replacement. [Laughs.]

Misa: Replacing the acid soaked machines?

Robertson: So I thought this is a good plan — if I could do this fairly frequently, I'd have a good sale.

Misa: Can't count on it, exactly.

Robertson: I hadn't quite worked out the mechanism for doing that. So I did that job for several years. I had more success than I deserved. I actually got to be a member of the Bill Norris Shark Club, without really feeling that I deserved it, because all I was doing was maintaining and upgrading existing sites, but I did — *we* — put a lot of effort into it

—bringing people out from the U.S. to talk to the government at high levels, and to establish relationships with — not the Premier, but the Deputy Premier. The Premier is equivalent of the Governor of a state in the U.S.

Misa: The 100 Percent Club is pretty well-known, but the Shark Club is not.

Robertson: The Shark Club was for top performers — there were usually about 20 worldwide each year that were selected for outstanding performance. They weren't necessarily sales people; they could be engineers or software people that had done something outstanding to achieve additional sales. And my award was because I put this effort into stabilizing the South Australian installations, particularly the government, in the face of very strong competition from IBM. But really, as I said, I never really saw myself as a salesman — it wasn't a super sales effort, it was just beavering away and getting the right people to come out and talk at the right levels.

Misa: It seems to me that the company back in Minneapolis was really paying attention to Australia. To be selected for a company-wide honor like this, somebody was looking out for you.

Robertson: Yes, I think there was a lot of focus on Control Data Australia because for the size of country, we were being very successful. We were selling a lot of Cybers, Australia-wide, and we probably had more than our fair share of "Sharks" over a period of some years. We were doing a lot of interesting things that hadn't been thought of

elsewhere. One of them was moving into the commercial area and things like the Australian Bureau of Statistics, Australian Taxation Office, the South Australian Public Service, significant involvement in the Western Australian Public Service — when I said "Public Service" I meant the State government — we were in the forefront of database management applications in Control Data.

Misa: Can you say a little bit more about that, the database management?

Robertson: Yes. In the commercial area, there was a huge interest in setting up databases for tracking all kinds of information. And it was at that stage that there was a shift — the database technology when we started was CODASYL-based, which was the standard at the time. There was a move toward relational database systems, and there was an initiative going on with a guy called G.M. (Sjir) Nijssen, a Dutchman I think, who was developing relational database concepts, and Control Data was funding him. He was a professor at a university. He was well known in academic circles for his work on database technology and Control Data was interested in picking that up and building on it. With Cybers, you had the real processing power to be able to do that. I don't know that it got terribly far, but we were certainly pushing that very hard. I mean, Control Data was traditionally a FORTRAN processing company; we were pushing COBOL. We were pushing FORTRAN to academics, but COBOL for the commercial applications. We were being very successful in convincing various sites, particularly the Australian Taxation Office, that our COBOL was very good and we were doing quite well with that. We had a bit of a setback because a consultant [an ex-Control Data employee called Ron Henry]

came out to Australia, looked at the Australian Tax Office, and told them, "Look, why do you want to do this in COBOL? You can do all of this in FORTRAN." And so suddenly, the Tax Office was telling us, "Why are we doing this in COBOL? You're good at FORTRAN. Why don't we do it in FORTRAN?" Well, that's the last thing we wanted, — because we had all these other sites and prospects that were clear COBOL sites. So somehow we had to convince them [the Tax Office] that COBOL and database management were the answer — and that was quite a challenge. But, in the end, they accepted it and were Control Data users for some years after that. That was a good site because that was in Canberra, but they had two duplicate sites, one on each side of Canberra, buried in the ground. I went to a presentation by the guy that was the head of computing in the Tax Office, and he started off his presentation to Control Data people — he said, "We're a little bit different from all your other customers. We have six million customers. And every one of them hates us. So we got to be very conscious of security. [Laughs.] So it was good business for us, because everything that they bought they duplicated to put it in the other site in Canberra. So, yes, that was my role in sales.

Misa: And that was as Branch Manager . . .

Robertson: That was as Branch Manager.

Misa: . . . but you were then National Sales Manager for Electrical Utilities from 1980-1981.

Robertson: Yes, that was a change. Control Data had been very successful in the U.S. and other parts of the world, installing major systems for controlling electrical companies.

Misa: Electrical grids, grid management?

Robertson: Grid management, and also a lot of stuff for the electricity generators. And so we were very keen to try and tap into that business in Australia, because every state had its own power company or power companies. The power guys in Queensland had one generating company and multiple distribution companies. And we had the best system in the world. So, it was decided that we should set up a separate group to focus on that business, and that separate group happened to be me and one technical support guy [Steve Davies], both based in Adelaide — seemed to everybody to be crazy. [Laughs.] But we weren't moving and they wanted us, I guess.

Misa: It was nationwide at that point; Adelaide was where you were living.

Robertson: That's right, but the focus at the time was actually Queensland. Queensland because of its mining applications, because of major growth, and because there was a move of the population to warmer climates. There was a lot of expansion going on in Queensland and we were beginning to attempt to sell them computer systems; to multiple organizations to do distribution and also control the generating function. We failed. We failed, I believe, for political reasons not for technical reasons. Queensland at the time

was a complicated political animal. I mean, it's gone down in history as being extremely

unstable, and business was done in a completely different way from anything Control

Data was used to.

Misa: It was going into a state-operated grid system — then you're really dealing with

the State of Queensland.

Robertson: You're dealing with the State of Queensland, you're dealing with the

politicians in Queensland, and selling was not based on technical considerations at all. It

was based on who was getting paid off by whom — and it's a well-known fact that at that

time, Queensland had a major problem in that area. So that role really only lasted for a

short time, I think we were involved in that for about 18 months. Really enjoyed it — the

technology was terrific, but Australia just wasn't ready for that technology, I think —

except maybe Queensland, and Queensland was too hard to sell it to.

Misa: Correct me if I'm wrong, but that was a line of business that Control Data had

been doing a lot of work on back in Minneapolis . . .

Robertson: Yes.

Misa: . . . so this was not new,

Robertson: No.

Misa: . . . but it was taking something that people at Control Data had done….

Robertson: We had no technical expertise in Australia — it was all coming out of Arden Hills and Minneapolis. It was a combination of Cyber equipment and smaller equipment that handled all the instrumentation and what they call SCADA [Supervisory Control and Data Acquisition] applications. So anyway, at the end of that time, I was offered the job of Southern District Manager for Computer Systems, which now merged Southern and Western Districts — so I took over sales management for Victoria, South Australia, and West Australia. So I had a group of sales guys in Melbourne, I had one sales rep in Adelaide reporting to me, and I had one sales rep in Perth reporting to me. And again, we were struggling a bit to sell Cybers by this stage. We were getting plenty of add-on business but new installations were few and far between. We sold a couple, but we were focused really on add-on business.

Misa: It sounds to me, at this point, this was mid-1980s or so?

Robertson: Yes — well, it was early 1980s.

Misa: Control Data really needed some kind of a new or different product.

Robertson: Yes, but not much was on the horizon. It was the Cyber 990, I think, which came out after I left the company — and we sold one of those to Melbourne University as

an upgrade after I left. In fact, the day that I left the company — and I left at lunchtime — and I had a busy morning, because the first thing I had to do was go to Melbourne University with a technical guy [Alan Conrad] and announce that the Cyber 990 was coming. And they then, after I'd gone, bought that machine — not because I convinced them that that was what they needed — but that was the first time that they'd heard of it. And then having done that, I had to go across town to the Royal Melbourne Institute of Technology [RMIT] and agree to final changes to the contract to replace their old Cyber with a new Cyber. And then I left at lunchtime having done those two things. [Laughs.]

Misa: And you left in 1984.

Robertson: Left in 1984, yes.

Misa: So two big pieces of business in the morning.

Robertson: I'd resigned in about May of 1984. I was asked if I would please stay on because the sales rep that had been handling the program over at RMIT had left, and I was handling the contract negotiations — and I was asked if I would please stay on until the contract was ready to sign. So I resigned to join another guy in a partnership to start up a software company. I resigned in May. I think I actually left in September. And every day I'd get a call from this guy saying, "Are you really coming to join me? I don't believe you. I don't think you're ever going to come join me." [Laughs.] So that was significant, that morning, because that was all done and I could walk out the door.

Misa: Why was it the case that you ended up leaving for this partnership? You said it was difficult to sell Cybers; were there others things that you saw going on?

Robertson: There other things that I saw going on, yes. There were a couple of other significant things. First, it was getting hard to sell Cybers, and I was very conscious of that. The guys that worked for me were very conscious of that; and there wasn't a lot we could do about that. The second thing was, at that stage, there was a significant standoff between Cybernet and the Computer Systems Division. Some of the major prospects that we had in computer systems were major Cybernet users and if we sold them a Cyber, then Cybernet business would tail off. So — not at my level, but at the next level up — there were endless arguments and discussions about how we would handle this situation. My guys were getting frustrated because they weren't allowed to talk to some of their major prospects.

Misa: Because the major prospects were also Cybernet clients?

Robertson: Because they were also Cybernet users. And I'd been insulated from that in Adelaide — I hadn't seen this. I was now involved. Although I was the next level down I was very much involved in the discussions going on at the national management level, and I found that quite distressing, because I felt that decisions were being made that were not necessarily, in the long term, progress.

Misa: Now, was Cybernet still basically connected most directly to Minneapolis?

Robertson: No. Cybernet was Control Data Australia. I'm not sure when, but probably in the early to mid-1970s. It started off in 1969, but it started off completely independent and, at some point, it became part of Control Data Australia.

Misa: So it was more of a functional split, not a Minneapolis versus Control Data Australia split.

Robertson: Yes. But the issue was — you had the Australian Managing Director, under him you had a Cybernet manager, and a Computer Systems Manager, an Engineering Manager, Sales Manager, and so on. These Cybernet and Systems guys, in particular, both had quotas set by Minneapolis, and so they had a business to run. The Managing Director was trying to balance this with these two guys. The people changed over time, but the situation didn't change and there were always these two divisions that were at loggerheads, because building one business would hurt the other business. The lines of [financial] reporting were straight down from Minneapolis and there wasn't much flexibility then. So I got a bit depressed with that. I thought it was not a good way to build a business. The other thing that happened was when we moved from Adelaide to Melbourne, I bought an Apple IIe for the kids. And I started playing with it, and I became fascinated with this. I also borrowed a standalone PLATO machine, which was a microcomputer in a terminal, to do some study using PLATO. So I had experience with two microprocessor-based computer systems and I thought, "This, I think, is going to be

the way of the future. And this is going to be a real problem for Cybernet, and if Control Data doesn't embrace this as part of its systems offering, then it's going to be a problem for Systems, as well." So I made a few attempts to get that message across — having played around with the Apple IIe. I knew the Apple IIe wasn't the answer, but I knew that that would lead to other things. I didn't get that message across. A friend of mine approached me and said, "I want to start this company." He had expertise in manufacturing software; he wanted me to do the sales and give him some help with the technical side, and it was all microcomputer-based. I jumped at it. Except that I didn't leave for three or four months after I resigned. [Laughs.]

Misa: What was the name of that company?

Robertson: It was called Albion Computing Pty Ltd, and we ran that for about the next 10 years. We ran into difficulties in the recession of 1990-91, because at that stage we were selling to small and medium manufacturers to run their business and, during the recession, no small to medium manufacturer in Australia bought a computer system. We survived by the skin of our teeth on our maintenance contracts, and then took an offer from a Canadian company, and just sold the whole company to them.

Misa: Sold it off.

Robertson: And went off and did some consulting. So that's the Control Data story, I guess.

Misa: Any other things you'd like to record this evening?

Robertson: There are a few other things that we've not touched on. I was going to comment on the arrival of the 6400, which was pretty interesting. Are you happy to continue on?

Misa: Oh absolutely, yes.

Robertson: I was a student in the Computer Science Department at the time, and . . .

Misa: This is in Adelaide.

Robertson: This is in Adelaide. This was 1966, and there was great excitement because we'd just bought a 6400 and that was coming into Australia — the biggest computer in Australia. And so a couple of us asked if we could please go down and meet the computer when it arrived, and we were given permission. So we went down to Adelaide Airport because it was being freighted in on a 707, a freighter 707 — the whole plane packed with Control Data computer equipment for Adelaide University. So we went down to Adelaide airport to meet it and greet it, and it was just the worst day for weather, ever. And I'm not sure whether the plane actually got diverted to — I can't remember — there was talk of it being diverted to Melbourne because they thought it wouldn't be able to land in Adelaide. I think possibly they did divert it to Melbourne, and then when things

cleared in Adelaide, they flew on to Adelaide. But when we were there, there was a big –

torrential – rainstorm, so that you couldn't see anything. Then the rain cleared, but the

wind was terrific. It was horrendous! So we watched this 707 come into Adelaide

Airport, and it really looked as though it was going to touch a wingtip on the ground as it

came in — it was just flying all over the place.

Misa: And you've got this big computer aboard.

Robertson: [Laughs.] It managed to get onto the ground; it taxied over to where we were

standing, and because we told the airport staff we were the Computer Science

Department people that had come to supervise the de-planing of this computer, they let us

onto the tarmac and we were able to walk over to the plane. And having got it on the

ground, they opened the front hatch which was a big lift-up door, and the wind caught it

and broke it off, and it flew right over the fuselage of the plane and crashed on the tarmac

on the other side. If anyone had been there, they would've been killed. If it had hit the

wing, it would've destroyed the plane. As it happened, it just destroyed the door. So we

were standing there as this plane sort of blew apart in front of us.

Misa: Wow.

Robertson: And they went ahead, lifted the computer up — it was fine — but the plane

was not so good.

Just an example of how Control Data works and, I guess, all computer companies work — one of the things that came up when I was traveling with John Hill, the Department of Defence sales rep, looking at computer systems for defense applications. There was one issue that he was very worried about. Control Data had just come out with new disk drives, the 844 disk drive, which was a multi-platter, very fast disk drive for its time. And we'd struck difficulty because it was so fast that the software couldn't keep up on Cybers, so what they did was they half-tracked it. So they took every second track of data, to give the software time to catch up — so they were running at half speed, effectively, on these disk drives. The Department of Defence were very keen on the 844 disk drive but were not keen on the idea that they'd have to run it at half speed. So there were all sorts of rumors about what was going to be done about this, and whether it could be done. So one of our tasks was to find out — to get the real facts — and all the work was being done in Sunnyvale. There were three projects going on at the same time in the Sunnyvale software development division. The first one was the Air Force Advanced Logistics System [ALS] that was being developed for the U.S. Air Force, the second one was a major system for the Union Bank of Switzerland, and the third one was a system for Skylab — all three being developed at the same time, and all three developed along a big, long corridor in the one building. So the sales guy, John, and I went to talk to them. We were told that the ALS guys were working on this, and so we went to talk to the ALS guys and we said, "Now, the issue that we have is that we've got a prospective customer who has to have full-tracked 844s. He won't live with half-tracking." The ALS guys said, "We've done a major study on this — and it's impossible — it can't be done." So, sort of on a whim, we walked down the corridor to the UBS project, and we said the same thing

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to the guys that were developing the UBS system — "We have this major problem." The UBS guys said, "Well, we've done a study on this, and we've worked out how to do it, and we're about to start development." So John and I said, "Let's keep going." So we went right down the end to the Skylab group, and we explained the situation again, and they said, "Oh yes. Sure. No problem — we've done that." [Laughs.] So we said, "Why don't you talk to those guys at the other end of the corridor because they say it's impossible." So the Skylab guy got out of his desk, and he said, "Where are they? Who are they?" And he stormed off down the corridor to tell them that they didn't know what they were talking about. [Laughter.] That was a great lesson to me anyhow.

Misa: How silos sometimes work very powerfully.

Robertson: Yes. Now the other story that I had was how the Western Australia Police Force got to be paid for Christmas. The Main Roads Department had a Cyber, and they were running a lot of applications for the Police Department in Western Australia. They moved to a new building and, at the same time, purchased a new Cyber to go in the new building. The Cyber was to go into the seventh floor of the building, and the problem was it wouldn't fit into any of the elevators. So, the only solution we could come up with was we would station a crane, a multi-level crane, in the middle of the main street of Perth — Adelaide Terrace — and they would take the windows out of the side of the building, deliver the computer up and put it through the space where they'd taken the windows out on the seventh floor. So we had that all planned, and it was to happen; it had to happen four days before Christmas. The reason it had to happen four days before Christmas was

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that the Main Roads Department ran the Police payroll system on that computer, and if that computer wasn't up and running four days before Christmas, then the Police Department wouldn't get paid — in which case it would be a good idea for us to leave the state very quickly. [Laughter.]

Misa: You'd have a whole lot of angry police officers with your number.

Robertson: Right. So I flew over to join the guys in Perth to watch this event happen. I remember standing there in the main street of Perth with all the traffic blocked off, diverted, with this huge crane lifting this massive mainframe up. It was kind of hanging and swinging there, and gradually, they managed to get it over, level with the removed windows, into the computer room. And the guys worked on that, it was up and running, and they ran the payroll system four days before Christmas.

Misa: Okay.

Robertson: That was pretty nerve wracking. [Pause] I was going to comment on some of the people that influenced me. I guess the first one, obviously, was Professor John Ovenstone, who got me into the computer industry, and then got me into Control Data. As I mentioned earlier, I believe he also had a significant impact on Control Data's early years. Roy Archibald — who was the sales manager in Adelaide before I moved there, and then became National Sales Manager in Melbourne about the time that I moved to Adelaide. I think he was not well understood by Control Data. I think he was an unusual

man with an unusual way of thinking. Very, very creative, and the installations in South Australia and Western Australia were very much his vision. Some of them ran into some problems, a lot of it being political rather than technical, and I think Roy took a lot of blame for that from people that really weren't familiar with the situation — didn't understand how small states like South Australia and Western Australia worked; and the interaction between people, and the opportunity to be creative and build a vision — which he managed to do. And for various reasons it didn't work quite as well as we'd all hoped, and I know Roy was devastated by that. But I think he was a real asset to the company, and his involvement with the South Australian government, for example, had major spinoffs with people like the Taxation Department, State Government Insurance Office in Queensland, which was another classic non-Control Data-type installation. I had a lot of dealings with him and I thought he was terrific to work with because there was this continuous flow of ideas coming out.

Misa: You also mentioned John De Beer.

Robertson: John De Beer was an interesting guy, too. He was Managing Director of Control Data Australia for a short period — couple of years. He was previously Country Manager for South Africa — moved to Minneapolis for a short time and then came out to Australia. He was another creative thinker; perhaps too creative. He picked up on Bill Norris's schemes — some of which were wonderful, some of which were pretty odd. You've probably heard many stories of Bill Norris growing tomatoes out on the roof of the computer center in Minneapolis in mid-winter, and setting up Commercial Credit as a

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subsidiary of Control Data to provide a stabilization when computer systems business dropped — and, hopefully, Commercial Credit's finance business would carry it through. He had a lot of creative ideas. Some of them didn't work very well. I don't know if you've heard about what was generally known as "cars for crims."

Misa: No, go ahead and tell me.

Robertson: Bill Norris, as I understand it, had the thought that because Commercial Credit was involved in leasing cars, a service to released prisoners would be to provide them with a car — because when you come out of prison, the first thing you need is somewhere to live and the second thing you need is a job, and to get to those places you need transport. So he suggested that Commercial Credit arrange special leasing for prisoners released from prison. It became a problem because prisoners released from prison tended to get into their cars and drive off into the distance, never to be seen again — so I don't think it was all that successful. But there were some other terrific ideas. Control Data Business Advisors was one; Control Data business centers — John De Beer picked up on some of those ideas and I worked with him, particularly in South Australia and Western Australia, where again, it was possible to sow ideas and have them take off, because it was a small community. We worked on establishing some of those activities in South Australia and Western Australia. I think either John had misread the support that he was likely to get from the Corporation, or they'd given him an indication that they'd support these initiatives and then backed off on it. But I think he overcommitted on some of these ideas, and then he and I had to rapidly do a back-pedal to explain that we weren't

going to be able to do that after all. Working with him, for me, was quite inspiring because he did have all these ideas. I don't know that that was well-seen by other people in the company who were perhaps a bit more traditional — "We sell computer systems — that's what we do."

Misa: Bill Norris got a lot of credit but also a lot of blame over the years for doing some things far from what was a traditional company, a traditional computer company.

Robertson: And some of the things were good ideas; some of them, like that leasing of cars to ex-convicts, maybe weren't such a good idea. So that was John De Beer. And of course, the other one was Trevor Robinson, who I didn't meet until he came back to Control Data. But because we had a number of things in common — because I was working with a lot of the clients he was working with earlier on — we became quite friendly and just sort of kicked around ideas together, which was quite exciting for me because he was a very senior person in the company and I felt pretty junior. But he seemed to think I was worth talking to at times.

Misa: Well, Rob, this has certainly been marvelous and we really appreciate your time and thought, care and attention. Thanks a lot.

Robertson: I hope it's useful. I was sort of working at the coal-face a bit more than some of the people that you've been talking to, so I've got a picture at a lower level — maybe not such a broad picture.

Misa: It's useful to have pictures at all levels. That's the key thing.