An Interview with

RON G. BIRD

OH 442

Conducted by Thomas J. Misa

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Control Data Corporation History Project

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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: My name is Tom Misa. I'm here in Melbourne, Australia, on November 19, 2013. I'm talking to Ron Bird, who worked from 1963 to 1975 for Control Data Australia, with the honor of having Control Data number 0001 as his employee ID. We'll be focusing mostly on the Control Data years, but Ron, to start with, can you say just a bit about your background and how you became interested in the computing field?

Bird: Originally, I was involved in the electrical, radio, television and industrial electronics industry. I came to the conclusion that computing was the future so I started to look around at what I could possibly do to change careers because I couldn’t see any big growth patterns in what I was doing. The electrical engineering company I was working for was a very old company, and terribly conservative. I applied for jobs at both IBM and Hollerith. I don’t know whether it was known as British Tabulating Machine Company; I think that was the name Hollerith was used at the time. I had offers from both companies but the English company Hollerith seemed a lot more friendly and less formal than IBM so I took the job with Hollerith.

Misa: Hollerith/BTM.

Bird: Yes. Well, [pause]

Misa: But it was known as Hollerith here?
Bird: Yes. Just at the time, they were merging with Powers Samas and became ICT, so that was happening virtually as I joined the company.

Misa: Do you want to say anything about your experiences?

Bird: It was a great company, very nice company to work for; paid terrible money. What they did do extremely well was training, and for the first four months I just did full time intensive training both on hardware and software.

Misa: Four months of training?

Bird: Four months, yes. Half was in the sales office in the city, and half was out at the Box Hill factory where they produced the punch card blanks.

Misa: And, again, remind us where the location was? Here in Melbourne or at Sydney?

Bird: In Melbourne, at 568 St. Kilda Road and the factory was out on Lexton Road, Box Hill. They imported equipment in from the U.K. and assembled it at the Box Hill facility. They also had a big plant at this facility that produced the blank punch cards from Swedish paper stock that was quite a big operation.

Misa: What kinds of responsibilities did you have?
Bird: My assignment when I came out of training was on-site engineer at the Commonwealth Bank note printing branch, where they printed the money for Australia. They’re now called the Reserve Bank. There were 120-odd female [workers] that entered the serial numbers of money that came out of circulation and came back to be burned. So this was the way the Commonwealth Bank tracked how much money was in circulation at any given time. And that whole procedure had not changed much since 1920.

Misa: So tracking each individual bill?

Bird: Yes. The girls had a safe built in to their keypunching machines and they’d take out the returned money, which had eight half-inch holes punched through it, then they’d key in the serial numbers of each note. And when one set was done, it was then verified then it would go down to be burned in furnaces down below.

Misa: What were your original responsibilities?

Bird: My responsibility was to keep all the equipment going including keypunches, verifiers, sorters, tabulators or listing machines, as IBM liked to called them.

Misa: So basically, that whole world of information processing done by cards, the unit record machines.
Bird: There were a few valve [vacuum tube] computers around at that time. So when I moved out of the Commonwealth Bank, I took on looking after valve computers. I think it was five in my little area up in the top end of Melbourne and these were called plug programmed computers.

Misa: Plug programmed?

Bird: Yes. So they weren’t stored program but programmed on plugboards. They were used by the Royal Australian Air Force and quite a number of companies like ICI, the Weather Bureau, Trans Australian Airlines, War Service Homes, etc.

Misa: And who was your employer during that time?

Bird: ICT.

Misa: Not working for the Commonwealth Bank.

Bird: No. I was just the engineer keeping the equipment running.

Misa: But still for ICT?

Bird: Yes. And at about that time I was also looking after the valve computers in Adelaide. I would fly over there on Monday morning and come back Wednesday
afternoon in propeller aircraft. That was for most of the big South Australian department stores that would run their payroll on Tuesdays. I moved to Tasmania in 1962 and was involved in the installation of the first solid state ICT machine at Cadbury’s chocolate factory at Claremont Tasmania.

Misa: At Cadbury’s?

Bird: Yes. That system was called a 1301, and we finished building it on the site because ICT was late on delivering and Cadbury was threatening to go to IBM. So we finished building it on site. Then the software didn’t work properly so we ended up programming all of Cadbury invoicing in absolute machine code, which was very efficient. [Laughs.]

Misa: Yes, very quick. Hard to program but quick to run.

Bird: So what was going to be a one-month’s trip down there ended up being closer to six.

Misa: And you were in residence in Tasmania?

Bird: Yes, in Hobart. Never ate chocolate for many years after that because the smell of it all day would just put you . . .

Misa: Too much.
Bird: Yes. So, came back from Tasmania and the company wanted me to move to Sydney because that’s where they’d sold three 1301 machines to two cigarette factories [Rothmans and WD & HO Wills] and Colonial Sugar Refining. I said well, I’m not going to move to Sydney because it’s much more expensive to live in Sydney than it was Melbourne at that time and really had no incentive to move. So then again, I started looking for jobs with other computing companies, and those companies were Control Data, General Electric, and English Electric.

Misa: And they were all having facilities in Melbourne.

Bird: General Electric and English Electric HOs were located in Sydney but the interviews were done here in Melbourne. John O’Neil had interviewed me for the English Electric job and as it turned out he knew at the time he was going to CDA. General Electric made me a written offer which I still have a copy. David McNab the guy that made the offer also ended up at Control Data. On the strength of the GE offer I resigned from ICT. The guys I worked with at ICT said well, before you accept the GE offer go and talk to Trevor [Robinson] at CDA. I’d met Trevor a year before in 1962 at Heymanson’s. I went through another interview with Trevor. Trevor said we’ll let you know within six weeks. I said well, I don’t want to appear as if I’m blackmailing you but I’ve already resigned from ICT on the strength of another offer, which I haven’t accepted yet. He said do you mind me asking who that is? I said General Electric, and I need to know within a week. Trevor said OK we’ll let you know as soon as we can. So I
went back to my office. Before I got back there was a phone message from Trevor, and on calling back Trevor made me an offer that I could not refuse. I accepted on the spot as this was a 30 percent salary increase to what ICT were paying me. So I ended up starting with Control Data on the 15th of September 1963.

Misa: 15 September 1963. Now, John [O’Neil] told me that there was an early group of six or seven; it just happened that you became Control Data Australia number one, because of “Bird” you’re first. So there was a cohort all starting at more or less at the same time.

Bird: Yes, there were two programmers, two engineers, Trevor and a secretary when I joined. There was also an American called John Barth.

Misa: John Barth.

Bird: Yes. And he was sort of the representative from Minneapolis. I don’t think John [O’Neil] would’ve met him because John didn’t come ‘til 1964. By late 1963 there were ten of us, and out of that ten, to the best of my knowledge, there’s only two or three of us left that are still alive. Claire Manual who was Trevor’s secretary, ended up in Personnel Management at CDC in Bloomington [MN headquarters]. Claire came back to Australia and later moved back to her home state of Queensland, and we never heard from her again. She was older than me so she’d be in her eighties by now, I would think.
Misa: Those early years, let’s go down two paths. One, I’d like to know about your career, your responsibilities; but can you just say just a bit about the office space and the environment?

Bird: Okay, the first office that we had was a two-story apartment or townhouse, I don’t know how you’d describe it. It was a two-story apartment or townhouse, probably built in the early 1930s or late 1920s, and there was a block of them with about twenty of them in a U-shaped courtyard. We had Suite 16. We kept the files in the bathtub. [Laughs.]

Misa: In the bathroom.

Bird: Yes. It wasn’t the greatest arrangement. At any rate, we expanded so fast in 1963 that year we couldn’t accommodate the number of people that we were hiring, and then we rented Number 17, and then half of Number 18, which we shared with a firm of lawyers — not liars — lawyers.

Misa: Sorry, a terrible joke I told.

Bird: [Laughs.] And we stayed there until we moved to 598 St. Kilda Road, which was in 1965, I think. Yes, 1965.

Misa: And the 598 St. Kilda Road now is probably not the same, exactly, but can you describe what was there at the time you moved in?
Bird: We actually had it purpose-built for us by a South African building company, and it wasn’t the greatest building in terms of quality, however, we had built in a very large computer room on the ground floor with air conditioning, and so on. The office space was not carpeted; it was vinyl tile floors, which was a mistake. We had metal partitioning, which was awful. It was not a terribly nice building, from an internal accommodation point of view. But it had good underground parking and because we couldn’t fill all of the building we sublet some of it to other tenants, one of whom being our public relations man, Bill Austin. Bill did all of our PR and our internal newsletters *Between Ourselves*, etc.

Misa: Is that Austin, T-I-N or T-E-N?

Bird: A-U-S-T-I-N, as in Austin car. Don’t know what happened to him; really nice guy and did a fantastic job. John might’ve mentioned him, did he?

Misa: Yes, I think so.

Bird: And he had an office up on the fifth floor. I must have moved in that building more than five times, because we were continually rearranging office space as we expanded.
Misa: So on St. Kilda Road is actually the first one is at 598; now my understanding is that also you were at 474 St Kilda Road.

Bird: Where we had the files in the bathtub, if you like, that was 474.

Misa: Which is two doors down from where we are at this moment, in 478.

Bird: Right next door.

Misa: Can we talk a bit about your career during these early years?

Bird: Late in 1963, Trevor asked me to temporarily move to Canberra. We had won the Bureau of Census and Statistics contract and we were required to transfer six million punch cards to magnetic tape in readiness for the arrival of the Census 3600 and the 3200. This was done on a 160A system at the Government Printing Office in Kingston ACT.

Misa: The Control Data models 3600 and 3200.

Bird: Also, there was a 3600 being delivered to CSIRO Canberra at the same time. Census did not have their computer site ready and so, as I mentioned earlier, I did a bit of site planning. I designed all the electrical; and it was quite a large installation; it eventually ended up with 64 tape units. The customer could not get the Department of...
Works to get the electrical work done so I ended up bringing a group of electricians up from Melbourne, whom I knew, and we did it ourselves. We saved the cost of having all these people arrive from Minneapolis, standing around while the Federal government Department of Works were twiddling their thumbs because they just couldn’t get their act together. So that was the start of our doing site planning/facilities management for customers. Customers liked to have the hassle taken out of preparing a computer site. When the systems arrived, I was worked with the Site Planning guys that came out from Minneapolis to install the two 3600s and the 3200. When I came back to Melbourne the Engineering Manager said well, you can be our site planning guy because CDA didn’t have anybody with my background being electrical. A lot of computer engineers are uncomfortable working with mains electrical of 110 and 240 volts. I’d attend to site meetings with customers and advise them what was required, and talk to their consulting and air conditioning engineers.

Misa: That’s a whole line of business that CDA got involved with here that you took charge for. You were designing facilities way beyond CDA, for other computer companies or other people using computers?

Bird: Not other computer companies, it was primarily for our own customers and we did some in Southeast Asia also, which I’ll come to. So that’s how I came to travel around. I was the most travelled man in Control Data for a time. I would do two or three site meetings with the customers prior to delivery, then when the gear was delivered I’d go and install it and do all the connections, and check out all the electric and fire it up. Then
once I did that, I’d hand it over to the onsite engineers and be gone. Another guy called Bob Secombe and I, we were sort of a pair. He was the hardware installation engineer.

Misa: Can you spell his last name, please?

Bird: S-E-C-O-M-B-E. Bob and I used to travel around as a pair and I’d fire it all up and then he was the check-out guru, if you like, on the 3000 series.

Misa: Do you have any stories or memories about doing one of these startups? I suppose it was something with a bit of drama about it, turning everything on for the first time?

Bird: No, in Australia, we never really had any major problems that I can recall. They all went pretty smoothly. The one where we did have the problem was in Thailand where the Thai electricians got two 600 amp cables crossed over, with an active connected to the neutral. There was a failure on the 600 amp breaker, when they threw the big switch resulting in large hole being blown in the electrical cabinet.

Misa: Where everything was going.

Bird: We had some interesting installations. One we did in Perth, which Bryan Gardiner was talking to you about. We had to haul the 3200 mainframe up to the sixteenth floor of the T&G building in the downtown area of Perth. We had an inch to spare [on] either side. That was a long, slow job. As well as doing all the site planning and installations,
we also arranged for all the local shipping and rigging to get equipment on-site because they were big machines and didn’t always fit through normal doorways, etc. Sometimes you had to take windows or walls out, but this one we had to take the lift (elevator) out.

Misa: So the machines themselves, the computers, were coming from Minneapolis or wherever they were made in the States at that time, shipped here. You would have the facility, building, the wiring, the cooling, the entire infrastructure, that was your responsibility to organize?

Bird: Yes. I also looked after the overseas shipping later on. Everything brought in from Minneapolis was flown in by charter aircraft. We only ever shipped one system by sea, and that was one we weren’t supposed to talk about (the 3400 for Department of Defence). And that had many problems. It was packed in a container and we had to unload it on the pavement. The wharf laborers (teamsters) were difficult to deal with and we had several union problems. So overall it made economical sense to fly equipment in. The charter aircraft companies we mainly used were Pan American, and Flying Tiger. There was another airline we used and I can’t for the life of me think of the name of it, but it was based in Detroit, and it basically flew auto parts around the U.S. for GM and Ford. They had DC-8s and if they weren’t busy of a weekend, or other times we’d get a very good charter price from them. They’re all mad, these pilots, they’d land here, check the engines, kick the tires, get the equipment unloaded, fuel up, and be on the way back to the US in a matter of a few hours. Flying Tiger guys were the wildest, they were real cowboys.
Misa: Especially during those days, it’s whatever . . .

Bird: Flying Tigers used Canadair CL44s for our freight.

Misa: . . . 10 or 12,000 miles, it’s a long, long, long flight.

Bird: They could get back to Los Angeles when a 707 aircraft was empty on a full load of fuel. On the way here they had to stop at Fiji or Hawaii or both to refuel. Probably one of the funniest stories was in Canberra in 1964 when the first systems came in. The CL44 almost went through the airport fence because they just didn’t have enough runway length. Canberra airport, the capital of Australia was assumed to have a big airport. Wrong. Flying Tigers came tearing down the runway, it was at night, and I think they stopped about that far from the fence.

Misa: A foot or so.

Bird: They taxied round to the terminal, then they powered down the motors, and so on. The next morning, the crew asked where’s your generator unit? Generating unit? Yes, we need that to start the motors again; you know, ground power units that are used for aircraft like Lockheed Electras use. Canberra didn’t have Electra’s or any other aircraft servicing Canberra that required a ground power unit. We had to get one trucked down from the RAAF Air Force Base in Williamtown NSW. That took a day, and of course,
the press got a hold of this because the CL44 has got a swing tail, and the freight comes out after you’ve opened the tail up.

Misa: Oh, yes, so you’ve got this quite dramatic view.

Bird: So the press were sort of having a field day and said we can lend you a can opener to open this up. [Laughs.] So that was our first experience with Flying Tigers and CL44s. There’s a video, actually, of one landing in Melbourne and opening up the tail, that I sent you the link for, which I took with an 8mm home camera.

Misa: I’ll make sure that we get that added to this record. [“Delivery of Monash CDC 3200 system 1964,” http://www.youtube.com/watch?v=vnicqCksRXk]

Bird: Yes. And there’s also a video of the computer room at the Bureau of Census, in the early days; the Control Data 160-A. So that was the shipping side of it. So we had quite a business. The airlines loved us, Pan Am and Flying Tigers were the main companies we used. I think it was 120,000 pounds in freight we could load in to a Boeing 707. CL44s were used extensively in the Vietnam war and I think first one we had chartered in 1964, went down in Vietnam. I could recognize the registration number, but not absolutely sure. CL44s were made under license in Canada by Canadair from the British company that made the Britannia, so the CL44 was the freighter version of the Britannia. Interesting little bit of aircraft history.
Misa: So in terms of your job, what do you think was the most significant challenge of actually pulling together these many, many different pieces? To get one computer up and running takes a whole bunch of work and you were at the center of things.

Bird: I would physically connect the various modules up, which was couple of days work with Hubble connectors for the peripheral equipment. You know what a Hubble connector is?

Misa: No, tell me.

Bird: It’s a 20 amp twist-lock connector that is used in the USA. It’s not used in this country or Asia. We needed special cable here and in Asia because CDC equipment used five-conductor cable. Four is standard here, not five; neutral, three phases and ground. So we had to get the cable specially made because you just couldn’t buy it off the shelf here. By and large I guess the main thing was motivating the consulting engineers to do what you wanted them to do because they had their own ideas about how they thought it should be done, but in the end, most of the people we worked with were very good.

Misa: Consulting engineers would’ve been hired by the client, by the customer?

Bird: Yes, they probably could’ve had one that did work on their buildings, and so on. And it maybe that they did both electrical and air conditioning, or we might’ve used a consulting engineers on electrical; VIC TAB did; they had separate people on the electric
and air conditioning but that’s another story. That’s why I hired Glynn Staggard, who you met Friday [at the monthly CDA lunch]. I could do all the electric and spec out the air conditioning, but what I couldn’t do was design the air conditioning. He was a mechanical engineer that worked for the federal government in the Department of Works, and was an experienced air conditioning design engineer. Glynn picked up on the electrical side quickly. If you came into Tullarmarine Airport in Melbourne, he designed a lot of the infrastructure at the airport; that’s what he was doing when I hired him.

Misa: That’s where I arrived. Okay.

Bird: So then that department, the site planning group grew quite fast. We hired draftsmen and then we had another electrical guy, and another air conditioning guy, so it grew fairly quickly.

Misa: During that site planning part, were you based in Melbourne or Canberra?

Bird: In Melbourne. The reason that I did the Site Planning in Canberra was because I was there looking after the 160A system that was converting punch cards to magnetic tape for Census. So the Engineering Manager said you can take on the Site Planning role when you come back to Melbourne. I said fine, that’s cool, I don’t mind. So I really didn’t get to work as a Customer Engineer on the 3000 series. I knew the 160-A hardware back to front and could program it in absolute machine code quicker than anybody could program it in assembler. Beautifully designed Seymour Cray machine.
Misa: 160-A.

Bird: A 160-A was the first CDC system that was sold in Australia. It was to the Australian Post Office, or the Postmaster General’s department in Melbourne.

Misa: That’s PMG, some people refer to it?

Bird: People refer to it as the Australian Post Office, but at that time telephones and the Post Office was the same organization and split off a few years later [Telecom and Australia Post].

Misa: That was the first system that Control Data sold.

Bird: Heymanson sold it. It was installed at the PMG Research Laboratories [at] 10 Lonsdale Street Melbourne. I had been looking after that system before I went to Canberra in 1963.

Misa: I’m not sure where the dividing line is, but then talking about your work for Australian Systems.

Bird: That didn’t come until 1969.
Misa: Would it be a good time to move to that then now?

Bird: No, there are a few things we probably need to cover. During that time, I did a fair bit of work in Southeast Asia and for Control Data Far East. The customers we were involved with were RMK-BRJ [Raymond International, Morrison, Knutson - Brown and Root and J.A. Jones construction], a consortium of building companies that were doing construction for the U.S. Navy in Vietnam. They were also known as “The Vietnam Builders.” Did a trip into Vietnam at the height of the war in 1966. Another Vietnam construction consortium was located in Silom Road Bangkok and also had a CDC 3000 system. This construction consortium was known as DZK [Dillingham Zachary Kaiser].

Misa: In Thailand?

Bird: In Bangkok. Southeast Asia, came under the jurisdiction of Control Data Australia. But the other ones I worked on were for Control Data Far East, which included Korean Institute of Science and Technology, in South Korea, known as KIST. That was an American Aid hands-across-the-sea-type deal as was Tata Institute in Bombay. Other CDFE projects included Commission for Taxation Reform in Taiwan.

Misa: The Commission for Taxation Reform?

Bird: Yes, and that one we had to get the oxy torches out and cut out steel stair rails to get the equipment on site.
Misa: Was that a government agency?

Bird: It was part of the Taiwanese government, and was sponsored by Madame Chiang Kai Shek, who was also a shareholder of Control Data Corp.

Misa: Okay, sort of an interesting connection to the government of Taiwan.

Bird: The other one in Taiwan was Chung-Shan Institute of Science and Technology, which everybody in Minneapolis thought was a university, but it was a government military research facility and we believed they were trying to build a bomb. They had a nuclear reactor from Siemens in the building next door. Our agent in Taiwan was David Huan, spelled H-U-A-N, and he was a nephew of Chiang Kai Shek. He was very well-to-do, and he was into exporting toys, asparagus, electronics and lots of other Taiwanese goods. Unbelievable character. There’s one I’ve missed there; the other one was in South Korea; There is one other that I missed which was KCC Korean Computer Centre. And that was a sixteenth century bath house we converted into a computer room for a CDC 3200 system in Seoul.

Misa: A sixteenth century bath house.

Bird: Yes. You couldn’t get electrical and air conditioning equipment in South Korea at that time, so you had to bring it in from Japan or from the US. The Koreans did not want
Japanese gear so we mostly used US made equipment. There was still a lot of ill feeling towards the Japanese. So we would buy it off Carrier or some other US company and ship it in for them. All electrical gear I would buy in Minneapolis — Square D stuff — and cable as you couldn’t get suitable cable in South Korea. I remember we ran short and had to buy some at the Sunday markets that had probably been stolen from the US Military. The other thing I did in Japan that was interesting was Ishihawa Harima Heavy Industries, which were shipbuilders. That was a very interesting project. It was a 3300 with a Cad Cam on it; with big color screens, which had not been seen before; very, very new stuff. So when it arrived in Japan, the installation location turned out to be in a Toshiba computer manufacturing town called Ome. This was because Toshiba owned a good part of this shipbuilding company. Nobody spoke reasonable English in the town. So I had to get an interpreter up from the CDC Tokyo office. When you get down to technical stuff, it was difficult because to get the site ready we had to do a bit of improvisation because the Japanese electrical system’s nothing like the U.S. So I had to get them to build a transformer that would give me the 5 wire star configuration and correct voltages I needed. I spent three days drawing diagrams for the Toshiba engineers, and I had to convince them why I needed it before they’d do it. And once the penny dropped — and it took a long while, then they went off and produced this transformer in a couple of days. It was a big transformer; about 100 KVA not little. We got that all fired up and I ended being there for six weeks. Rather than travel out from Tokyo which was a 2 hour plus trip, where you had to get on the government railroad, and then a little private railroad. Ome is within sight of Mt. Fuji a beautiful place. So I moved into the local Japanese inn where the visiting company people stayed and that was an interesting
experience with my room having a view of Mr. Fuji. The only thing I couldn’t handle was rice for breakfast. [Laughs.] But fortunately, there was a U.S. military base, not far away, and I would go there in a taxi and have food like toast and eggs and bacon.

Misa: They could cook breakfast.

Bird: Yes. I stayed there until the software man came out from the US and installed the CAD software. The CDFE Japanese customer engineer (Yamada San) whose English was not great but he was an excellent engineer so we got it all going.

Misa: So, you’re basically, in some ways — correct me if I’m wrong — you’d get an assignment to install at this Japanese shipbuilder, and you’re flown in and needing essentially to rebuild, or create a slice of Australia or the United States in the middle of Korea, or Taiwan, or Japan, and to make sure that this American machine somehow would be interfacing ….

Bird: Yes, because all the voltages and frequencies would be different. Glynn [Staggard] took over for me when I went into project management within ASD. Glynn took over all Site Planning as I had enough of the traveling because of all the time spent sitting on airplanes and in hotel rooms. I’d get back from Southeast Asia or the U.S. and be off to Perth, or New Zealand, or wherever.

Misa: You wouldn’t have time here.
Bird: No. I think there was one year I was three months in Melbourne, the rest I was traveling. But Glynn seemed to thrive on it.

Misa: I’m sorry, that’s Glynn [pause]

Bird: Glynn. G-L-Y-N-N Staggard. And Mike Spark was the salesman who sold those services.

Misa: So now is it a good time to switch to Australian Systems?

Bird: Yes, I’m just trying to think of anything else in the site planning area of interest.

Misa: Sounds like a huge job.

Bird: It didn’t seem so at the time; it was a lot of work, but I just loved what I did. When you finish an installation it was a great feeling of satisfaction when you went and pressed that big green button and the whole system fired up. I knew enough to be dangerous on the 3000 series hardware side. I could run the diagnostics. But beyond that I didn’t have the 3000 series training for fault finding.

Misa: That’s where these onsite software people came in.
Bird: Had to also have the onsite hardware engineers.

Misa: Running and then maintaining them. But then you’re basically getting it to start up, run diagnostics [pause]

Bird: Yes, and make sure the air conditioning’s holding because they’re very critical on temperature, of course.

Misa: That’s right. Many places in Asia, the temperatures could be very hot.

Bird: Well, you get there and somebody’s stolen the thermostat. You have a young boy standing there and he just turned it off and on to maintain the temperature. [Laughs.] So we did get another temperature thermostat for the air conditioning in Saigon.

Misa: So a human thermostat, you’re saying.

Bird: We had a few people in Vietnam, out of Australia. There was probably at any given time, half a dozen there. Control Data had its own accommodation, which was a walled villa that had its own Mama-san, and maids to look after the team, cook the meals, and so on.

Misa: And where in Vietnam was it?
Bird: It was near Cholon. Accommodation was provided for the programmers and engineers including CDA personnel in a secure walled villa at 51A Phan Ton, Dakao Saigon. But as well as the Australians, there [were] quite a few Americans there from Control Data Corp. It was a U.S. Navy project, and the guys from these construction companies told us that the company was under penalties and estimated [that] half of their workforce, which was a couple of thousand, were Viet Cong by night. And because they were on penalties, they paid them off to leave their sites alone, that’s what they told us.

Misa: Amazing times.

Bird: Whole different world. It was very interesting and a little dangerous but the food was fantastic.

Misa: Glynn took over those responsibilities from you.

Bird: Glynn mainly did projects in Japan, South Korea, Taiwan Thailand and of course Australia and NZ. Now, before I get off that, the Tokyo office was interesting in that the Dick Rennie CEO of CDFE, who was an ex-Sabre fighter pilot in the Korean War; interesting guy. The sales manager Yong Kim had worked for Seymour Cray in Chippewa Falls. You ever heard of him?

Misa: Yong Kim, no.
Bird: He was South Korean; absolutely brilliant guy. He spoke faultless Mandarin Chinese, Japanese and, of course, Korean and English. I was told he ended up as CEO of Epson printers in the US.

Misa: Really, Epson.

Bird: Yes. He was married to an American girl; Dick was married to a Filipino girl; the Australian support manager, Bill Bryant, who’s back in Perth now, was married to a niece or a relation of Chiang Kai Shek. We’d go out to dinner at a hotel and I’d probably be partnered with one of the Japanese girls from the office. The waiters would wonder who’s with who! Control Data Far East had a very busy business and a very social life. In 1969, before I took on the project management role in ASD, I was going to move with my family to CDFE Japan. Got a fair way down the track. I’d been to the U.S. and negotiated conditions that I’d go there on. Control Data Far East had enough work to justify having me in Tokyo. And then my marriage broke up and I ended up staying here, so that was that.

Misa: And you would’ve been located in Tokyo?

Bird: Yes. Then I had a couple of other offers from within Control Data Corp, one was in South Africa, and I looked at that; the other one was in Brussels; and the one I was really interested in was in Rio. And as you may have known, Control Data took over Telex in Brazil. So they offered me a job down there and they said well, come down,
have a look, and tell us what you think of the place. Unfortunately, when the time came
to go, my divorce came up in court and there was no way I wasn’t going to be in that
courtroom, and then the whole Rio thing fell through. So it wasn’t going to be a job
anyway, as it turned out, but them’s the breaks.

Misa: So that was about 1969 then?

Bird: That was 1969, yes. So, what I ended up doing in my first major project was
taking on the Royal Thai Turf Club and also the RAAF message switch. For some reason
there was no restriction on talking about the RAAF project, even though it had very high
security.

Misa: So those were two of the early [pause]

Bird: Yes, the RAAF Darwin system was running back to back 1700s. I went up to
Darwin and stayed in the officer’s quarters on the airport. At that time, Darwin Airport
was operated by the RAAF, so it’s virtually a military base. U.S. people there now, as
well.

Misa: And was there a shift in your responsibilities when you took on project
management?
Bird: Yes, well, because I was on site in Bangkok I did site the planning, for this project. This was a A$1,500,000 project, which was a 3100 and a 3300 for the Royal [Thai] Turf Club. We wrote the software here in Melbourne and checked it out as far as we could go. The software was a variation of the Victoria TAB software, except it was on course, not off course and was called COLT. We loved these acronyms with horsey names derived from Computerized OnLine Totalisator.

Misa: C-O-L-T, right?

Bird: Yes. The Thai people were good to work with and it was a great project. So on Christmas Day 1970, we travelled to Bangkok in a chartered 707 from Royal Caledonia Airlines, which is the Scottish airline. This aircraft had brought a load of Scottish immigrants to Melbourne. They packed all the seats up in front, and we loaded up all the computer equipment in the remaining space. We had six seats down the back for the project team including two Thai engineers who had been down to Melbourne on training. We sat down in the back and flew to Kuala Lumpur and then on to Bangkok. There’s photos of that on the EX CDA website. So, we started installation on Boxing Day 1971. After hardware and software installation we did major volume testing, because it had to run reliably.

Misa: Again, this is this real time betting system for people, and a lot of money rides on it.
Bird: Right. And my story about this is on the [CDA] website, but I’ll briefly describe what happened. We would get up to 500 girls of a night, to really hammer the ticket selling machines, which were made by ATM Sydney [Automatic Totalisater Machines]. These were heavy duty machines that you could hit with a sledge hammer and you wouldn’t break them. We tested them every which way of software and combination of all the different bet types. The Royal Thai Turf Club’s not where foreigners go, it is mainly local Thai people that go there. It’s grand opening day. I’m in the royal box with the RTC committee and the King of Thailand. I’m sitting up there nervous as hell because I’m thinking please let it go well. The big infield indicator in the middle of the race lights up. It’s the first day it’d been used. The first race was a forecast race and only had three runners in it. But odds were coming up for nonexistent betting combinations and I’m thinking oh great, something is wrong! Somchai, the Racing Club Secretary is sitting beside me, and I said you’ve got to make an announcement. He said, don’t panic, it’ll be alright. So I didn’t know what to do because we’re on a really stiff penalty of A$10,000 every time the system failed. So what’ll I do?! There was this big six-foot foreign devil (me) jumps the fence, through all the crowd in the members stand, over the fence, across the race track and into the infield where there was a concrete blockhouse. Pulled the plugs out of the indicator lights. The nonexistent forecast combination suddenly disappeared! People were betting money on it because it was showing 999 to 1, it didn’t exist but punters were putting money on because the odds were so high. I said to the secretary you’ve got to make an announcement and give them their money back. He said we’ll wait and see if they complain. Nobody complained, and they did not return any money. Anyhow, it was a very simple problem to fix and we did not have to pay a $10k
penalty. It was one very unlikely combination we hadn’t tested. So we fixed it the very next day. From that day on it ran for a year, never missed a day. During the week it was used as a data center for the United Nations Mekong Delta Project, and universities got time on it for free, but while it was under royal patronage, it still required some injection of money from the RTC stakeholders who were mostly multimillionaires.

Misa: So this, the Totalisator would be going only on the weekend during the betting time?

Bird: Only on Sundays.

Misa: Only on Sundays. So the other six days…?

Bird: The other six days it was used as a service bureau or data center. Whist we were installing the system there were many people to deal with; they didn’t know what they had, they really didn’t. I’d come up with a change in the specification that I needed to get signed, and they’d look and say, is it alright, Ron? You sure it’ll be alright? Yup. And they’d sign the specification changes on trust. I wouldn’t have liked to get on the wrong side of them, as you may know the Thais can be unpredictable if they perceive someone has done the wrong thing.

Misa: So you wanted to be cautious.
Bird: Yes, but by and large, the Thai people were great to work with, as long as you did the right thing by them. It was six months, on and off, I spent there. I came back to Melbourne for one thing and another during the project. It was one of my most enjoyable projects.

Misa: You had a lot of contact with Australia, of course, also with Thailand, Taiwan, Japan, and it sounds like much more limited contact with Control Data back in Minneapolis.

Bird: No, with the site planning, I visited Minneapolis probably once every year or so. Jim Liska ran the site planning group in Minneapolis, in Arden Hills, who I think may have died. Lovely guy.

Misa: Jim Liska?

Bird: L-I-S-K-A. I would go there and we’d compare notes of what we were doing and what was the latest thing. But the other thing I did while I was over there because I couldn’t keep my hands out of the computer side of it, I did some training down at Industrial Products Division down on Penn Avenue. And that was for the VIC TAB Multiplexers, called 3276. These were to be the front end to be used at the VIC TAB site.

Misa: This is Penn Avenue in Minneapolis.
Bird: And at that time, we also brought back one unit. Because we were having the first Australian computer conference in Canberra in 1966, we wanted to demonstrate some of this communications gear. We also had the Rabinow Optical Character Reader. Rabinow had just been taken over by CDC. We were the first ones to ever show an optical character reader working in Australia. Bill Polglaze who was with me looked after the OCR. I think the claim to fame with these multiplexers from Industrial Products Division, was to send data down the coax cable on the east coast of Australia from Melbourne via Brisbane to Canberra. We had two 160A computers talking to each other. In 1966, that was a bit of a breakthrough and I don’t believe anybody else had ever done it. It was a 160-A in Canberra connected to the 160-A, in Melbourne, at the PMG research labs. So data was sent up the east coast to Brisbane from Melbourne and back to Canberra through the coax cable.

Misa: We don’t remember it well enough but there were all kinds of proprietary computer network schemes going on in the 1960s. ARPANET became the famous one, but there were many, many different networks.

Bird: Yes. This was just straight computer to computer that nobody had really seen. We couldn’t get any modems to work properly in this country and the guy that got them for me was an Australian. Bruce Bamborough (who later started Data 100 in Minneapolis) got hold of them for me and sent them out to Australia. These were Rixon vestigial sideband modems, which were a very unusual modem because they were amplitude modulated using single-side band.
Misa: Single-side band.

Bird: Yes, vestigial sideband, that’s just a nice way of saying single-side band. And we actually got them to run at 2400 bps, which was unheard of in those days, Telecom’s copper lines weren’t that great at that time. So that was a bit of a breakthrough. We had a very successful computer conference. Control Data had great exposure to the general computer community.

Misa: Yes, because Control Data was very strong with the government business, with scientific computing; but CDA as well as Control Data back home tended to come a little bit later to the commercial applications.

Bird: Yes, too late. Like Livermore, and places like that, got very big and even Boeing who had a lot of CDC gear. I visited Boeing Seattle in 1969 on the way to Minneapolis from Japan. One of my colleagues from University of South Australia was working there so I got the grand tour of the Boeing plant that had just started producing 747s.

Misa: Would you like to say anything about the climate of working at Control Data Australia; the culture, the people?

Bird: The culture was excellent. I’ve never seen another company that had the sort of culture of Control Data. Everybody worked together. I mean, now and then you get a
little bit of backbiting, but you get that at every company. By and large, people worked as
a team group, and we got things done; we made things happen; and this was all due to the
leadership of Trevor Robinson and his example of how to operate and how to act just
went right down through the company. And I attribute most of that success to that one
man, I really do.

Misa: So how did he set the signal, or set the tone in such a powerful way?

Bird: That’s a hard one to answer, probably, but Trevor was a great promoter. He’d
promise something and then go a little bit more, which is a known advantage, of course.
But it’s very true and most people there took his advice and did that. People worked
together and the company was very generous. We worked hard, and long hours. But we
also played hard and the company was very good from a social perspective. We’d have
Friday night drinks, wives and partners were always included. We had a very active
social club, which my wife Barbara was the secretary of in the early 1970s. We had some
marvelous functions and they were always well attended. Those functions were always
featured in Between Ourselves newsletters. But yes everybody got on. Engineers always
blamed the software people if something went wrong; and the software people blamed
the engineers. [Laughs.] It was all light hearted. But just the team effort when putting the
CARBINE system together at TAB was something to behold. That was no mean feat,
believe me. And some of the people there were just so talented and it was incredible. I
have worked for a lot of companies, and I’ve never seen so much talent in one place. I
don’t believe any other company came close at that time as to the pool of talented and
experienced people at CDA. You saw how many people were there on the monthly Friday lunch that still turn up and mix with each other after 40 years. What does that tell you?

Misa: Well, it says something and I’d appreciate your reflections on what you think it might mean.

Bird: Even outside of our monthly lunches and reunions there’s a lot of mixing of groups outside of that. As an example Glynn Staggard and I mix socially on a very regular basis along with one of the shipping guys.

Misa: So there’s really quite a community.

Bird: Yes, there’s probably other groups that I may not necessarily be aware of, both in Melbourne and interstate, I know there’s a lot of interaction between people depending where you live.

Misa: I wanted to make sure we had some time to talk about Data 100, is it a good time to move to that?

Bird: Yes.

Misa: You moved there in 1975.
Bird: Yes, I was approached to take up the position of Australian Support Manager. Data 100 wanted to set up in Melbourne, and Bill Bryant, who’d been the support manager at Control Data Far East had moved to Memorex in Santa Clara.

Misa: In California?

Bird: Yes. And then Memorex wasn’t going anywhere in the computer area, it went back to making media, I think, and got out of the computer business, per se. Bill joined Data 100 in the US and moved back to Melbourne, hoping to be the CEO of Data 100 Australia. He sold the first Dat100 batch terminal system to Melbourne University in 1975. However, there had been arrangements made in Minneapolis that Jess Barber, who had been with Trevor Robinson at Data 100 Europe, was going to run Australia, or as it became known Data 100 Western Pacific. Jess Barber came out and set up in the office just down the road from here at 464 St Kilda Road, with Bob Secombe as the sales manager. They approached me to come on board as support manager. So three of us ex CDC engineers were sitting in the office with one machine out in the field; and we were going to build a business. And it went like you wouldn’t believe. We got into Telecom (Telstra) because most of us knew people in Telecom. I think we ended up with about 15 systems there. The revenue from the maintenance paid the wages and the rent. Then we moved into New Zealand and set up agencies in Singapore, Malaysia, and Thailand. We were also doing support for Data 100 Far East, which was a separate entity. We did a large project for the Korean CIA. South Korean CIA had undertaken a program to have
everybody issued with an ID card. And we set up this in an old tobacco factory in Seoul, and we had over 800 screens. They ran three shifts a day. People’s details were entered in the Data 100 data entry systems. One of the tasks I had was to have Korean keyboards made with the Korean Hangul character set. And we did the same in Thailand. We modified a band printer that would print Thai. The band had to go around four times to be able to print every Thai character. So we did a bit for the Malaysian Bureau of Statistics in Borneo. We had two systems on the island of Borneo in Sandakan and Koto Kinabalu and a few systems in Malaysian Telekom also.

Misa: Malaysian Telstra.

Bird: Yes. And Singapore Telecom, which were two separate entities. Data 100 Western Pacific’s customers were predominately blue chip organizations, such as banks, oil companies, insurance, mining companies, etc. Most of the equipment we rented rather than sell outright, which we encouraged. Telecom always insisted on buying outright. We had this huge rental portfolio, and sold part of it off. [Laughs.] We knew there was a finite time we could keep doing this because PCs were going to take over data entry, and batch terminals were already on the way out. Unfortunately, Data 100 had done little research or developed any new products. So the word went out, to “move iron” to get money in, and fatten the company up to make it look attractive to sell. McDonnell Douglas and Northern Telecom became the two bidders that came down to the wire to buy the company. Northern Telecom, decided they needed a computer company like AT&T had bought NCR. And so Northern Telecom won the battle in 1978, and from
there it was all downhill because it was NTSC [Northern Telecom Systems Corporation] which we always said stood for Never Trust Smiling Canadians. That’s not fair, though. They were nice people but they didn’t know what to do with a computer company. They’d had also bought a little company called Sycor in Ann Arbor, Michigan. It was a “me too” product, being a UNIX box that everybody else had so there was nothing that separated you from everybody else. I realized that the company was not going anywhere, so I bailed out in 1985 after 10 years with the company. And as it turned out, I was right with my forecast. And so I went off and had a mid-life crisis and did all sorts of really weird things for five years.

Misa: What did you do?

Bird: I was the General Manager of Australian Pacific Gem Company, and we sold opal and other precious gem stones into the US, Japan, and Germany. We had our smaller opal stones cut in North Korea.

Misa: North Korea, not South Korea.

Bird: North Korea, because we didn’t lose anything that way. If we got it cut in the traditional places such as Hong Kong or Sri Lanka, you could expect to lose about 20 to 40 percent in shrinkage. North Koreans didn’t know the concept of theft so we had the maximum yield possible. One of our partners was a gemologist and took cutting machines to North Korea and trained people allocated to us by the government how to cut
opal. Because the North Korean government wanted something back in return we had to buy some goods from them. We bought sterling silver jewelry, which our wives all told us was horrible [I still have most of it]. Also crystal glassware that was indistinguishable from Czechoslovakian bohemian crystal. We also bought a container load of beer glasses and another container of “bridge nails” which we sold at a good profit.

Misa: Right.

Bird: A lot of “bohemian” crystal was actually made in North Korea, as was most jewelry such as wedding and engagement rings for the Eastern bloc countries at that time.

Misa: Leaded glass.

Bird: Yes. And the other thing we used to buy off them to keep the balance of trade was brown tinged diamonds that came from Madagascar. These were traded outside of the DeBeers cartel. We couldn’t get enough to sell. So in the end, we made quite a lot of money selling these diamonds in the US. Our only Japanese customer was a ring maker and he came to the Mitsui Bank here in Melbourne and he’d pick out the oval black based opal stones he wanted and arrange a bank check for up to A$80,000, hop on the plane and go back home again. No shipping, no insurance, it was fantastic. Our US agent was a diamond dealer based in Utah, he was a Mormon and had eight kids. He did a runner on us and took us for US$10,000. Never tracked him down.
Misa: Taking a runner, that’s a way of saying he disappeared.

Bird: Yes. And our German sales lady, whose name was Hiltrud Vogel, you know what Vogel is in German?

Misa: Bird.

Bird: Bird, yes. Pure coincidence. And Hiltrud was a real tough lady. She sold almost A$500,000 worth of gems. We would give her goods on consignment. She carried a zapper with her; and carried all the stock around in a large briefcase. She only sold to the manufacturing and wholesale jewelers in Germany. And she was just a fantastic sales lady.

Misa: What do you mean by a ‘zapper’? A defensive weapon? A kind of stun gun?

Bird: Stun gun, yes. Anyhow, she got very, very ill unfortunately, and her boyfriend decided she couldn’t do it anymore and packed up all the stuff and sent it back without checking with me. That created a huge problem for me with Australian customs. I had no end of problems fighting with them because it was about $30,000 worth of stock they sent back. Anyway, I eventually got out of paying the 33 percent duty after a drawn out battle with customs.

Misa: You pay on the stuff going out, you didn’t want it coming back.
Bird: Yes, they carried it out, there’s no record of it ever going out but where else do you get opal from? There’s only one other place and that’s Mexico. Hiltrud came out to Australia and had hand carried the stock back to Germany. My two partners and I had mining leases in Coober Pedy South Australia. Companies can’t hold mining leases for mining opal. The mines are just holes down in the ground, and you go down in a bosun’s chair. They’re all mad out there, they really are. Miners make their own explosives. They make it up in newspaper tapers with fertilizer and diesel. Then stand round the corner underground and set it off. Interesting place to visit. I don’t know whether I’ve still got the lease.

Misa: You might. [Laughs.]

Bird: Well I took it out in 1985 but I don’t know whether it had a time limit on it. Three of us had leases up there and the local policemen used to work the claims for us. They leases couldn’t supply all of what we needed so we’d go and buy from other miners what we needed. We’d go out to Mintabe where they mine black based opal in an open cut. It’s an aboriginal reservation so you have to get permits to go out there. That’s what our Japanese customer bought. He would never question the money; he didn’t speak English; he’d just pick the stones he wanted and leave a couple. Then get the bank to write us out a check. It was lovely. [Laughs.] So the other things we did was buy second hand Harley Davidson motorbikes from California. This was a disaster as the dealer turned out to be a criminal. Four of us bought the freehold of a special condo retirement village, which
almost sent us bankrupt. Wrong time, wrong place; 17 percent interest money. We bought it for A$2,500.000 and in the end the bank sold it off for A$1.600.000 but we managed to survive. Had a mobile telephone company, called Celcom Communications, and what we did, in the very early days was design and build a solid state answering machine and a hands-free, which none of the phones here in 1985 had. We had it manufactured at IBM’s production line in northern Victoria Australia. They had the best facilities to do what we needed. We made money out of that business. We sold it off to one of Australia’s largest parking companies Wilson Parking. If you did development research at that time in Australia, you got large tax breaks. That’s the only reason they bought it. So we sold that off because we knew we couldn’t compete with the Motorolas, the NECs, and so on. We made a good profit out of it. So after having got all the mid life crisis out of my system, I went back to the computer industry and went to work for Digital Equipment. They had advertised for a senior troubleshooter. I applied for it and got the position. Digital had dug themselves into a huge hole with Telecom (Telstra) and they were looking for somebody to dig them out.

Misa: Senior troubleshooter, that was the job description.

Bird: Yes, I was interviewed here in Melbourne. The job was actually from out of DEC Sydney and out of 40 people, I got the job. I’d been out of the industry for five years, which is a long time in the IT industry. So they got me down at Telecom and it was just a mess, an absolute mess, completely out of control. So to make a long story short, after two years there, I managed to turn it around and ended up making a quarter of a million
dollars profit. It was one of the first customer support Help Desk systems in Australia, which was written from the ground up in Progress 5GL.

Misa: Digital had somehow gotten wrong footed.

Bird: They were out of their area of expertise. They had never ever done projects like that before. Digital’s strengths was to sell to universities, etc. and somehow they’d got into this and didn’t know what they were getting into. But they sort of moved on. We ended up setting up an outsourcing department, which I was heavily involved with. There were some very big projects there. Queensland Electricity Commission was a $28 million project where I spent three months in Brisbane; another one for the Victorian government was about the same money; and then they were taken over by Compaq then Hewlett Packard took over Compaq. Didn’t like Hewlett Packard at all.

Misa: The consolidation.

Bird: Yes, but Hewlett Packard were a bunch of snotties, they thought they knew all about outsourcing, and they were rank amateurs and were losing customers like you wouldn’t believe. And in the end, I got very, very ill and I said I don’t think I can or want to work here anymore. I was doing a big project for Northern Territory government. We’d done one, which was $28 million, then they were going to do another one, which would be about the same sort of money, and I said I can’t travel anymore. And they stopped all of the project development in Sydney and moved everybody down to
Melbourne because I was here. And then I got so sick I couldn’t work, and then they moved everybody to Darwin.

Misa:  Back to the north.

Bird:  Yes. Originally when I got sick, the project team was in Sydney. I spent half my life in Sydney, going back and forwards, up on Monday back Friday. But I’m getting too old for this. I had some serious heart problems and few other problems, and said it’s time to give notice. That was in 2002. But, no, the computer industry has been very kind to me. I enjoyed every bit of it. The last few years not so much. Hewlett Packard used to have a reputation as one of the finest companies to work for. I just didn’t like them. I thought they treated their staff badly and they were ruthless and rude. Maybe it’s because we’d come from Compaq. Telstra, for example, here in Australia, did not buy anything or have anything to do with Hewlett Packard at that time so I was told by a senior Telstra Manager.

Misa:  HP. Too bad.

Bird:  Don’t know why but they don’t.

Misa:  HP has got a number of puzzles these days, so we’ll leave that for another conversation.
Bird: What used to amuse me, a lot of the people that worked at HP would go down to the local Chinese computer shop to buy their personal computers. We’d get 36 percent discount with HP and still most HP staff wouldn’t buy them.

Misa: Is there anything else that we should talk about?

Bird: What else. We didn’t really touch on New Zealand but I’m sure Marcel will cover New Zealand. I didn’t do an awful lot there with Control Data other than some early meetings with the NZ TAB people. I had some responsibility as the NZ TAB project manager reported to me in the early days of that project. But at Data 100, I did because we had quite a good operation in New Zealand.

Misa: Well great. Thank you so much for your time this afternoon.

Bird: I’m sure I’ll think of other things, but didn’t think of anything else you should know.

Misa: I think we did a pretty good job of going through the parts that we wanted.

Bird: I tend to ramble on a bit. [Laughs.]

Misa: Thanks for your stories.