



Oral History of Neil Hancock

Interviewed by:
Günter Steinbach

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Steinbach: This is the oral history of Neil Hancock recorded on September 5, 2018, at Neil's place in Perth, Australia. I'm Günter Steinbach and I am in Palo Alto, California, in the United States, interviewing Neil over the phone. Welcome, Neil, and thank you very much for agreeing to this interview for the Computer History Museum.

Hancock: No. Thank you very much for having me.

Steinbach: Sure. I contacted you because you were the first to mount a touchpad or, rather, a touch mouse in a laptop computer. But this interview is not just about that. We want to record your complete oral history up to now. So let's start with the start,



with the background. Where did you grow up? A little bit about your family. Maybe childhood hobbies.

Hancock: Okay. Well, I'm about, I think, seventh or eighth generation Australian. I live in Perth, Western Australia, which is the most isolated city in the world, and we're on the west coast of Australia. And I was born in a place called Mount Lawley and I'm now residing in a place called Mount Claremont. And I have two parents; they're still alive. And I have a sister who has three children, and she's happily married. And my youth was spent in mixed areas. I was very much-- my family's very musical, so I do have a lot of interest in music. I've played drums, piano, and guitar. But through watching endless amounts of reruns of American TV growing up, I got very interested in technology and science. And that sort of led me slowly but surely into the direction of the business I'm in now. I think when I was in probably grade seven-- grade six or seven, I got involved in CB radio. So I got mostly interested in radio communications and talking around the world as well. And again, that stimulated my interest in this area.

Steinbach: Okay. So that's how you went-- that's how you drifted into engineering and computers?

Hancock: Correct. Always had an interest in electronics as well.

Steinbach: Did you get an engineering degree?

Hancock: No. Actually, I started my engineering degree. I ended up getting into a computer and digital systems course, purely because the business had already started and I was actually being pulled in another direction to actually start this engineering business, really, is what it was. But I have ended up with a master's in leadership and management.

Steinbach: Okay. Which, since you now have your own business, came in handy, huh?

Hancock: It certainly did, but I got that later on in the process as well. There's quite a story behind that too.

Steinbach: Well, do you want to talk about it? <laughs>

Hancock: Okay. Well, let me see. We will talk about the business later, but there was a point in time where there was a-- basically a recognition of the top 40 businesses for people who are under 40 in Western Australia. And I was one of the winners and that was terrific and one of the local universities contacted me and said there's an opportunity to complete a master's in leadership and management. Would I be interested? And I was. So that's what I finished. So that was a terrific departure from just running a business, which has been an interesting experience, to say the least. We are now 35 years old. Not me. I'm 55.

Steinbach: <laughs> Okay. So that sounds great, that the university comes to you and asks would you want to work with us?

Hancock: Yeah. I was very, very proud. I-- it's-- and it's an exciting field, the IT industry, and it's constantly-- you're learning constantly. And specializing in portable computers is what's kept us ahead of the curve. And that's-- that was always my interest, but we'll discuss that in a moment, because I'm aware of the questions that are coming.

Steinbach: Yeah. I was getting to that, namely that I read in some of your things you sent me that you developed software for the Sharp handheld computer. Did you actually write for the PC-1211, I believe it was called? I had one of those in the early eighties.

Hancock: Oh. Well, I actually-- I have a PC-1211 right here. But that's actually not the machine.

Steinbach: Ah.

Hancock: That's not the machine that I was actually writing for. The story about that is quite interesting, because this is actually what led me into this whole area. Where I started engineering, all my colleagues were using Hewlett-Packard calculators. The HP-41 comes to mind. Something within me doesn't like to conform. So I looked around for anything that was not the HP-41 and I stumbled upon Sharp, who was



developing the next-- the successor to the 1211, which was the PC-1500, which is, to this day, I think, the most successful pocket computer in history. And the PC-1500 was just amazing. It turned out to be 50 times more powerful than anything else on the market, but I noticed that it was missing some critical engineering mathematics software. And a colleague of mine-- a friend of mine and I decided to start a small business called H&M software and we developed some basic engineering maths packages for the PC-1500. From that, we became noticed by the Sharp Corporation, who then turned around to me and said we'd like you to produce this for all of their pocket computers. There was actually a competition running and that's what got their attention. They thought I would have been about 40 years of age, but I was about 19 at the time. So they were a bit shocked, but there's quite a story behind that too. They actually took me around Australia and I gave a speaking tour around Australia talking about pocket computers. And even a trip to Japan, where I went and met the designers of the pocket computers. And through that, I realized the breadth of the tentacles, really, of how far the pocket computer industry went. Germany was huge. The U.S., of course. There was a pocket computer newsletter and it just opened my eyes to the scope and scale of the computer industry that I was just knocking on the door of. And as a young student who was just trying to make a little bit of money from the bookshop, it was very interesting. And about this time, when Sharp sort of said listen, you should really look at doing this seriously, I said, well, it would be nice to be able to sell a few pocket computers to some of my friends and colleagues at the university. Now, they said no problems. We'll give you a dealership. Now, I had no idea what that actually meant, but it turned out to be fairly serious. And that's where Portacom started and it was Portacom that was the name of the business that I began back in 1983, and that was a creation of myself. I had a bit of a falling out with the previous business partner and this was the sole direction that I was going in. When I spoke to Sharp, they said, listen, it's nice to have the software, but we need you to actually produce a package that we can market, both here in Australia and around the world. And that was a bit of a shock because I just thought you just wrote the code and handed it over and someone else would do the job. And it turned out that then, there was documentation and there was boxes and there was packaging and there was duplication of cassette tapes, of all things, because that's how the code was transferred in that time. I've actually got an example of one of the products here. This is called the advanced mathematics package and I'm just holding this up so you can see. And inside here was a book, a cassette tape, and basically, everything from matrices to-- what else do we have here? Base conversions, factorials, hyperbolics, complex numbers. We had interpolation, that type of thing. Finding real roots of $f(x)$. So there was a lot of interesting things that was useful here. About that time, I also developed an RPN simulator for another pocket computer from Sharp, and that was also marketed, actually in the U.S. through a company that was specializing in Hewlett-Packard calculators back then, called Educalc. So, if you look carefully through one of the Educalc catalogs, you'll see a Sharp pocket computer and an RPN simulator, which was actually my design.

Steinbach: So you were-- when you started that dealership and PCs, you were 19, you said?

Hancock: Yes, 19. Nineteen or 20, yes. That's correct.

Steinbach: Wow. <laughs>

Hancock: I-- well, honestly, it was just an exciting thought that I could even play in this area. But it was something that no one else was doing around me and I thought portable computers were certainly a future direction that the world would move in. And-- but in '83, that was quite a decision to make.

Steinbach: Yeah. How did-- well, was there financing involved? Did you have to get money to start it or was it just you sitting a home--

Hancock: Well, at this-- at the early stages, I was operating, actually, out of my parents' garage. My parents were very supportive, and that's one of the wonderful things about my parents, but financially, no. I had to do it on my own. The money I'd made from the maths packs certainly helped, but I think my very first office that I could afford didn't have an air conditioner and was \$80 a week. So it was very humble beginnings.

Steinbach: <laughs>

Hancock: And I think every second phone call was my mother. So we had just begun.

Steinbach: <laughs>

Hancock: And I was really green and very naive to the world of business, but it sounded like a lot of fun. So I started to move into that area. What then happened is there was a few people in the Sharp Corporation who started to mentor me and I started to learn a great deal about the industry I was moving into. And I was benefitting from the interest and I had quite a drive, quite a passion at that stage to understand and promote and support computing at the portable level. That was my main focus. Because it was-- it all started from handhelds and where we are today, where handhelds are just about ruling the world, it's fascinating, the full circle we've come in.

Steinbach: <laughs> So did Sharp have a local place in Perth or did you have to travel to see them or did-- was it just done all over the phone?

Hancock: Well, initially, I mean, they did have a Perth office, and they had offices in every state of Australia. But Sharp and Toshiba were the pioneers in the portable computer, laptop/notebook world. Sharp was very strong in LCD technology; still are. And Toshiba and Sharp were fighting each other for many, many years, and that's quite an interesting thing to mention right now. Because only just recently, the Sharp Corporation just purchased the Toshiba PC division. So somebody inside Sharp has got a long memory.

Steinbach: Okay. All right. So obviously, you didn't have employees at the start. When did you start hiring people?

Hancock: My girlfriend at the time actually helped me immensely. And we-- it was really just-- <sighs> I, think having an office is what made me realize that I had to do something. And one of the first lessons in business I learned is that if you actually put yourself out there, people will start to notice that you exist. I

was-- it was really just through sheer determination that I persevered through the first six months and then it was a year. But bit by bit, we started to make our mark because we were the only people that knew anything about portable computers, in Perth, that is. And we became-- over the years, we actually became the largest supplier of portable computers from Sharp and then NEC and then other companies as well because of our focus. We really understood the technology. We could promote it well. But the critical thing with computing is you need to know how to support and service them because things go wrong constantly, certainly in the early days. And we were very focused in that area and, bit by bit, we grew. But the really interesting thing and the main reason for our call was, I think, about two or three years into the business. I'd heard that in America, there was a giant computer show called COMDEX. And I thought I really should go there. So whatever money I had left, I bought myself a ticket to fly to Las Vegas and have a look around. And I did that in '89 or '90 and it was in 1990 that I started seeing things that potentially led to the invention of the touchpad device-- or the touch mouse.

Steinbach: Okay. So this was-- well, so there were mice, of course, at that time, and did you hate having to reach away from the keyboard or how did it occur to you that this should be done on the portable computer itself with touch or with some other way? But how did that occur to you?

Hancock: Well, what happened was that I-- we had been dealing with all the major manufacturers of portable computers. And they were all, since the invention of Windows and preceded by GEM, actually, for those who remember that, there were attempts to create some form of attachable mouse device. There were devices that clipped on the side. There were balls around the screen. I know that Compaq did that. There was AST had a lovely device that clipped to the front. But they were all attempts to introduce some form of mouse device to a portable computer. Now, when I was at COMDEX in 1990, I saw a display from MicroTouch, and they were putting together touchscreens on CRT monitors. And you could, you know, touch it and move your finger around and it was magical that it actually would work and it could emulate a mouse. And I thought that's fascinating. I'm sure one day, that's going to appear in a portable computer. And that's pretty well how my mind was thinking. But what happened was that around about the same time, Sharp released a product called the PC-6220, and that was, at that stage, the world's thinnest notebook computer. And interestingly enough, at that stage, one of the main options for computers, or portable computers, were modems that were all-- you'd buy a modem device, such as this, and it would plug into your portable computer. You'd pay a few hundred dollars for that and away you go. The 6220 from Sharp was a little different in that it was so thin, the place that you actually placed the modem was in-- on top of the keyboard, under a



replaceable-- a removable flap. And I started to think, well, that's a modem. So that'll have all the communications points of the notebook. I wonder if someone could take a touch technology, remodel the plastics, of course, on the notebook, and actually slot it into the machine? I thought I'm sure someone else had thought of that, but I called MicroTouch anyway. And I said has it dawned on anybody to do? And they said to me, look, it's great in theory, but no one's prepared to design a new notebook computer around a hypothetical mouse device in case it's-- will it ever work? And I said, well, look. I think I've found a way to retrofit on into a current commercially internationally viable product. And I just-- that was, like, has anyone thought of this? And they said no. Would you do the electronics? And I said absolutely. I mean, I think this is a marketable sellable international product. So-- and I was all of 21 at this time. So this was very exciting for me. So we went ahead and through Portacom, the business, we actually designed the circuit board, which is an example here. But this is populated in some of the pictures I've shown you, but that's what it was. Just to give you an idea, that's the original flap on the machine. This is the patented device that would go over the circuit board and over the touch sensor. The touch sensor, an example is here. This was a capacitive device, not resistive, and that's a big deal, because all the modern-day phones now use capacitive touch panels, and this was ahead of its time.

Steinbach: Right.

Hancock: I also have in my hands one of the first machines, which actually has the Touchmate, I thought that was a great name for being Australian, fitted in there, and it's the first time that a product like this had appeared, a commercial product, that showed the potential of having a touch device inside a



portable computer. It wasn't in the greatest position, above the keyboard, but that's the best we could do considering it was actually a modem slot in the original place. Interestingly enough, it wasn't just Sharp that ended up with that hole in exactly the right place. But Texas Instruments and Sharp got together and started developing a series of notebooks and the entire top chassis was exactly the same as what I've just shown you. So there was a range of Texas Instruments devices that all would take the touchpad as well. So--

Steinbach: Cool.

Hancock: At COMDEX in '91, when we actually had these products on display, I had everyone going Eureka, that's it. I-- that's exactly the way it's got to be. It worked very well. I had people shaking my hands from one side of the aisle to the other. We had actually launched the product back, I think, in May, at Computer '91, which was a Western Australian computer show. And people were congratulating me left, right, and center. No money was flowing, but they were saying that you've hit on the right idea. So-- but taking it to America and showing it off there was-- really gave everybody the-- as they say, the Eureka effect. It could be done. It worked well. And they were many people sitting in the background ready to

come up with a product when people wanted to have a laptop with a touchpad in the machine. And today, almost 99 percent of all portable computers are now using some form of touchpad or touchscreen in their system. We actually developed prototypes for Acer, Texas Instruments, and, of course, Sharp. But as time went by, it became very obvious that to pursue manufacturing in Australia was just well beyond my age and certainly, we didn't have a Silicon Valley in Australia. And pretty soon, as a few years went by and we started to see people like Apple release products with touchpads. Dell was actually going to have exactly our device in their machines and then they decided to take the manufacturing overseas and they chose a resistive type of touchpad in their computers. But bit by bit, it became obvious to me that I was a bit young and a bit naive to think that we could have actually been manufacturing this product in Australia, but we did sort of try. But I had to really choose between pursuing an endless dream of manufacturing that really couldn't happen inside Australia or continuing my business, which was pulling me in both directions. So I felt satisfied that we'd made a difference and gave people the idea that a touchpad inside a portable computer would work.

Steinbach: Okay. Just going back. So the manufacturer of the touchpad was actually doing the electronics for you? Right?

Hancock: No, we used the integrated circuits they provided, but we actually designed the electronics, the circuit board, the interface that-- we did that all ourselves.

Steinbach: Okay.

Hancock: Yeah. I mean, that--

Steinbach: Okay. So the manufacturer just provided the driver chip?

Hancock: Correct. Yes. And of course, they had to design a specific size for the glass panel. Interestingly enough, that size that we have here was just basically what I could fit in this shape. But you'll find it's very interesting that that size is pretty well the size of everybody else's touchpads out there on the market.



So it does make me wonder just what they based their designs on. But that was a very proud moment. Back in '91, when we had, I think, three prototypes on display at COMDEX, and that was on the MicroTouch stand, and it certainly gave people the idea that this was the future direction that would work.

Steinbach: Were those three prototypes in different machines, different models?

Hancock: I think they were-- there was a Sharp and I think there was two Texas Instruments machines. And--

Steinbach: Okay.

Hancock: They certainly garnered a lot of attention at COMDEX at the time.

Steinbach: Hmm. Very good. How big was your company at the time? Was it just still-- just you?

Hancock: No, no. We'd got to about, I'd say, five or six people at this stage. We actually started a service division, but we were growing and that was the problem. I had to chase a dream of manufacturing, which I really would like to have done, but we were just too young and the finances were not there. So I slowly but surely built an IT business that initially specialized in portable computers. We've now branched into more managed services, but we still love the whole portable computer side of things. But we've-- a moniker of Portacom is that we became the biggest supplier of portable computers in Western Australia since 1983, and we're now 35 years old. We're a quality assured company, ISO9001. And we're centrally located in Perth. We're quite well known. We've got a very good name in Western Australia, and because of the touchpad and because of our history at the time we've been involved-- we predate Dell. We are that old. <laughs> The-- we've got a lot of tentacles in the manufacturers who've given us insights and we've been able to provide a lot of feedback to help in product development as well over the years. So I feel pretty proud of that-- about doing that as well.

Steinbach: Yeah. So that's been 20 years now, right, that you've had your company?

Hancock: Thirty-five.

Steinbach: Ah. Ooh. Right. Time flies.

Hancock: I know. It does. And I've left my run late, but you wanted to know a little bit about my personal life. About 10 years ago, I was on a cruise ship in Greece and I met a lovely American lady who was traveling with her family, from Pittsburgh. And we fell in love and we married and I now have a four-year-old daughter called Jeannie. So Cathleen lives in Perth. Her family's still in Pittsburgh, but we do-- we visit regularly. And it's been-- yes. It's-- that's the completion of my life. <laughs> I now am a family man and I now have many directions for my focus as well as just the business.

Steinbach: Yeah. That's what happens in life.

Hancock: Mm-hmm. It's certainly been a change. A wonderful change.

Steinbach: Going back to Portacom one more time, are you still privately held or did you go to the stock exchange?

Hancock: No. We're privately held. We've had people look at taking us larger many years ago, but you're probably aware, when the GFC hit, that really, really did a number on most IT companies. In fact, a lot of companies just failed. If it wasn't for the fact that we stayed fairly profitable in the early days, it would have killed us too. So we've been challenged for the last 10 years, but we are-- we're still fighting fit and moving forward.

Steinbach: Okay. And I read somewhere that you sell some products under your own brand. What kinds of things are those and does it mean you are now running an R&D department?

Hancock: Any time we see an opportunity to investigate a product, we do see what we can do. I still like to keep my fingers in the potential for R&D. We do help some security companies around Australia as well with some access to our knowledge and technology. A lot of the products that we've had developed for us and that we've worked on are actually more peripheral products for portable computers. As a side issue, going back about 10 years, we were still producing RAM cards by hand, hand-soldering, for the pocket computers from Sharp, and we they were shipping those devices around the world. So we still kept our finger in the pocket computer pie.

Steinbach: Okay. All right. I think we're getting to the present. Can you talk a little-- well, give us an idea of how you balance work and private life?

Hancock: Travel helped. Studying helped. But the biggest shock to the system, really, was getting married and having a wonderful daughter. That's forced me to find some form of balance. But I think, because I have an interest in music, I do exercise, I play squash, I ride my bike-- I try to ride it as often as I can, but it's not easy. But I try to regularly exercise as much as I can and keep a healthy sense of humor as well, seems to be critical for me as well. It's important to see the funny side of life and it's-- that's one of the most important things to me. Because it's still a game that we play, even in business, and it can get you down and there are great times and there are sad times, but as long you stay positive and look forward, anything is possible. So I'm pretty thrilled from that perspective. I'm actually quite amazed at-- when I was looking through the history of the company for this interview, we have actually kept, since day one, 35 years of scrapbooks of all the major moments in this company. So there's a lot of history here if anyone wanted to have a look. But that's really just a surface look at what we've done, but thanks to this business, I've managed to marry an American and travel the world and learn a great deal about an amazing industry, which is the IT industry. And I've felt that even for a very small amount, I'm a little, small cog in this big wheel, this big engine, but I feel like I have made a small but important contribution to the portable computer industry. So I'm very proud of that.

Steinbach: Okay. And rightly so. All right. Thank you again very much for giving us this interview and I wish you all the best for the future of your company.

Hancock: Well, thank you very much, Gunter. It's been lovely talking to you and I'm here if there's any other questions that you need. We have samples, prototypes, photos, magazine articles. Obviously, this product has been written up over the years many times and there's a lot of history there as well. But thank you for your time.

END OF THE INTERVIEW