The Past and Future of Australian Innovations in Information and Communication Technology (ICT)

Oral History Interview

04

David Merson

Interviewed by:

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Project Summary

This interview is part of a series of oral history interviews undertaken by the Pearcey Foundation and the University of Sydney as part of the project 'The Past and Future of Australian Innovations in Information and Communication Technology (ICT)'. The series interviewed recipients admitted into the Pearcey Hall of Fame from 2003 to 2020. The hall of fame recognizes outstanding life-time contribution to ICT in Australia in business, research and government. Each oral history captures a short biography of individuals who made an outstanding contribution to ICT in Australia. They also collect insights on aspects that had a lasting effect on ICT innovations in Australia, positive as well as negative from approximately the 1960s to the 2010s. Interviews lasted about 60-90 minutes and were conducted by Sebastian Boell, Graeme Philipson, Peter Thorne, Kai Riemer, Sandra Peter and Belinda Wang. The complete set of interviews in this series is archived by the Pearcey Foundation.

Key Points Covered in this Oral History

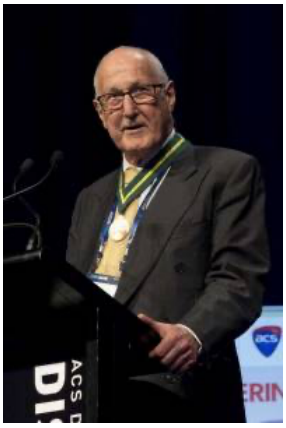
1. The cultural cringe that Australian companies are derivatives- they tend to purchase the techs, except in the leading industries (e.g. mining and agriculture) where businesses have interests in investing in innovations.

2. The Austrade has long been a big help for Mincom's international expansion, including the EMDG for localised marketing, low-cost loan and a role in linking up to local businesses.

3. Having lots of local talents who graduated from high education has been a valuable resource for being a leader in the field, so governments should be in the role of promoting industry and academia collaborations, e.g. CRC.

Biography

David Merson



Founder of Mincom
Pearcey Medal in 2015
Pearcey Hall of Fame in 2015

Entrepreneur, Doctor Honoris Causa

Dr David Merson graduated in 1963 from the University of Queensland as an Electrical Engineer and spent the first four years of his professional career at the Commonwealth Department of Works as well as studying for an Economics degree at night.

All this time he was quenching his thirst for programming having been introduced to the GE 225 at UQ in 1972. He moved to Sydney in 1968 to join the GE Timeshare team which in turn took him to the UK working at Rolls Royce Systems Integration group training programmers. David then commenced working in the computer vendor marketplace, first in ICL as their European Communication Systems expert and back in Brisbane working for CDC (1971-72) followed by three years at Compunet, the local pioneers in what was called the Remote Job Entry (RJE) marketplace. During the 1970s much of the Australian mining industry's computing was provided by US-based mainframe computer utilities, with limited mining applications software. So, after a couple of years of consulting in Brisbane, David conceived of a new business model which, in 1979, he turned into a new entity Mincom to deliver superior software applications in the mining sector with just $50,000 of capital. David remained its CEO until 2000.

During his tenure, Mincom grew to be Australia's largest software developer and exporter, with revenue of $200 million, 1300 staff, 20 offices around the world, and global leadership in a number of software categories. Mincom today is much more than mining with most of its software dealing with asset management and maintenance, resulting in its software being suitable for most asset-intensive industries such as utilities, transport and defence.

During the early seventies David joined with several local software companies to start the Queensland Software Exporters Association, ultimately transforming it into the Queensland arm of AIIA. Since retiring from Mincom, David has become a director of a number of Australian software companies (including Euclidean and Traxor), research institutes and charitable institutions.

His commitment to the ICT sector has been recognised with a number of prestigious awards including a Centenary Medal from the Australian Government, the initial Tony Benson Award (2006) and an Honorary Doctorate in Engineering from the University of Queensland.

Interview Transcript

Date of interview: Friday 04 September 2020

(Brief summarize your biography)

I went to school in Brisbane from the age of nine until I finished High school and then went to the University of Queensland to study Electrical Engineering. That was in 1960 and I was there for four years till 1963. It was around 1963 that the UQ got its first computer, a GE225.

I've written about that in the in the history book.

It was in the Department of Engineering which was probably appropriate at the time. We were the first students to get exposed to computers. I became much more fascinated with them than I was with the Power Systems Engineering I was doing. I was put through university on a Commonwealth cadetship with the Department of Works and had to work for them for four years after I finished. After a few months here I persuaded my boss that there was an awful lot of stuff they're doing laboriously with slide rules that could be done by programs. So I spent most of my time there developing computer systems to automate both technical electrical engineering problems and also the business ones. I invented a system to coordinate the work of all the departments. When I'd finished it, someone said that looks a bit like critical path scheduling. They explained what critical path scheduling was, so I reinvented that essentially for a system to the Works Department.

Did the Works Department have its own computer or did you use the one in the university or somebody else's

I used the university's. It was one of the few computers available in business out there yet the department didn't have any computing facilities at all. So, when I finished my bond, I responded to an advertisement from GE Information Services who were setting up the first bureau service down in Sydney and got accepted by them. I moved down to Sydney and started working with them. That was in 1968. They had opened a time sharing service down there. They had probably done it the year before, and I spent a year doing that, which I enjoyed immensely, mainly as a technical consultant designing computer systems for engineers and the like. I got a bit of an understanding of the business.

Then I went overseas for four years working in the UK predominantly at Rolls Royce. I was involved in their Completing Education service they had, given courses to people on computer systems design and the like. That was in Derbyshire with the spin out from their Aero engine divisions, which is based there. And then surprisingly, the Aero-engine division got into bad problems. The company that I was working for called Systems International. They called us all together one day and said there was some bad news. The business was doing very well but unfortunately, they'd lent all their cash to head office of Rolls Royce to pay their salaries and we can't get it back and they had just gone into liquidation.

So did they split the aero engine and automotive into separate companies.

So anyway, this company sort of ceased operations at that point. I moved down to London and joined ICL, as part of the European sales organization, helping branch offices around Europe put together proposals for various contracts. That was good fun. And then I came back to Australia.

What year did you come back?

That was about 1972. It was about 1973 I guess when I joined Control Data in Brisbane as a technical consultant for their bureau service. I did that for a few years and then Len Rust who I had worked with at GE in Sydney contacted me and asked me to head up their operation for Compunet, in Brisbane, which I did. I spent a couple of years, a few years, there.

Compunet was an early bureau wasn't it?

It was. A UNIVAC system. We did quite a lot of work with a lot of the mining companies with Utah Development Company (UDC) and quite a few of the others. So I built up a network of contacts in that industry. And then I went out ready or not on my own in '77. I think, yes, it was the Compunet that got taken over by Computer Sciences. And I didn't particularly want to be involved with that. So I left and set up as an independent consultant. Just looking for work out in the marketplace,

Are you doing coding or systems analysis or was it business analysis?

It was largely business analysis. I worked at jobs for various organizations. I recall there was a fishing company looking to automate their prices from prawns from the Gulf down to the Gold Coast where they had a processing facility. I spent some time studying that and saw that the problem wasn't something they had solved through computing, they had to simply simplify their whole business operation and not transport the prawns for long distances but fly them out from a ship up in the Gulf. There were a variety of jobs and I spent some time working with some of the mining companies doing various systems analysis type operations. But I had, at the end of my time at Compunet, I had spoken to Len Rust and others about the business model for the Bureaus which I thought was basically flawed, because I've seen over time, the best customers who develop the skills and developed a high level of usage soon found the service was too expensive. There was a time when computers were becoming items which organisations were starting to buy for in-house use rather than bureaus. So they tended to lose their best customers and as a consequence they built up an army of sales and technical people to go out and find new customers to replace the good, very profitable ones that were losing. The charging algorithms just charged for the IT resources based on so much per CPU seconds, so much per megabyte of disk storage, or pages of printed reports. So, for people who are making heavy use of it, it rapidly became an economic imperative to buy their own machines. I argued for a different model which was too revolutionary for the utility model they had all based it round, so they wouldn't do it. So I eventually decided that this was something worth doing myself. And as you know, at the time the superminis were coming out, which essentially offered mainframe capability but a much lower price point. I came up with this idea of essentially looking at an operation based on a leasing model for a computer over a three year period, where you got larger companies to subscribe to a share of that facility. And going through doing all the sums, I was able to show pretty effectively that companies whether we're using high level or high levels of bureau service, could get a 10 to one improvement in their performance through this model. The condition was they had to lock in for a three-year period based on a fixed price per month per terminal and royalties on the use of any software or whatever they used. Our difficulty was I couldn't find anyone who would come up with the money to underwrite it. Until a guy called Lionel Singer.

We we're talking to all the computer companies about buying a computer for this service and Lionel called me one night and said: "Look, I've got a deal which might appeal to you. I want to open an office in Brisbane. We are going to put a machine there just for demo purposes. I'm happy for you to use that and start up your bureau. You can save me some costs by

manning the office for me. Place an order for a Prime 750 and I'll let you use the bureau service for six months. If within six months you can't afford to pay for it, then we go our separate ways. But if you can you we'll continue on". I thought that was a great idea. So we set up shop using the Prime office machine and inside well, quite a bit less than six months we had a big enough customer base to underwrite the lease deal on the computer and all the infrastructure.

What year is that? Does that mean Mincom then?

Yeah. We set up Mincom based on that. And that was about the end of 1979. About October, 1979 was our first month in operation. We signed up quite a few customers. I mean, one of my co-founders was a guy called Bill Hudson. Bill had been doing all the IT work for Houston Oil and Minerals exploring up the Oaky Creek coal mine in Queensland. They were happy and developed a very good deposit modelling system. So I did a deal with them, that Bill would join us. and they would give us the system if we continue to evolve to meet their needs.

Was it all mining companies during those early years.

It was predominantly. We also did some work for a couple of State government departments, they signed up, based on the economics of the service we were doing. Because I spent quite a bit of time in the utility business, I knew a lot of the people who make heavy use of computing or bureau services and was able to offer them essentially a 10 to one improvement in the price performance of what they are getting. It wasn't hard to convince some of them to switch over. So inside of 12 months, we'd signed up most of the significant mining companies operating in Brisbane, CRA and so forth. We were able to lease a Prime 750, to purchase that including all the infrastructure: the emergency power plant and so forth. And we got up and running with that. It took off very, very well. We grew rapidly for the first three years just based on our bureau service. But the nice thing about the bureau services was that we had all the computing capacity and a lot of our customers asked us to develop software for them. So we were able to develop that software. Most of it was paid for by customers. The development costs but then we put it up as part of the bureau service. Those who paid for us development didn't pay a royalty for use of these others who came in to use it.

Did it evolve gradually into what Adrian DeMarco would call products?

We evolved into products, yes, we had products from early on, because some of the participants who came in with me had had some software products. A guy called Max Beatty who is someone you should probably talk to. He led a successful business developing a financial modelling system, which we used at Compunet for doing the spread-sheeting for the mining companies to evaluate their business operations in total. Max provided this software to the service, which is very useful to us. He dropped out after the first year, but we kept the software on. We gradually built up a repertoire of systems, the most significant was when ARCO was using it to prove up the CARA coal mines, actually committed to developing the mine approached us to have had whether we could we had any capability to provide with the system for operating a mine. We said "No, but we thought we could find someone who did". One of the people who joined us was Alan McCrae, who had worked up with Weipa, developing their mine operating system up there.

Yeah, I remember Allan?

Right. I'd actually given Allan the reference for that job because the mine manager was a bloke I used to flat with. Carl Stuart. I knew him. And we went up there and he was spending a lot of money on developing the system on programmers and so forth. I offered him a deal to give us use of the of the code. We develop the system, enhance it with the things he wanted to see done, which he hadn't been able to do that up there. And he could have it back for free on his IBM environment.

So we struck that deal and some of his people came down and joined us and we sent up there to look at the Weipa system. They sort of liked it and agreed to contract to buy it, if we converted it over to operate on our Bureau and have six months to take that system, redevelop it on Prime and provide it to the bureau facility. We did that because we had to so we could develop it in a way in which we can sell it back to IBM. We developed a quasi CICS environment transaction processing system for the Prime. So they gave us access to their operating system.

Was that part of your transition then from being a bureau to being a software company?

Yes. It was because we developed this system so we could write code which we can port automatically onto an IBM environment or the Prime environment. And over time we started talking to the other mining companies who had anything from UNIVACS to Control Data and were able to develop the mechanism to transport to any environment from our development environment. We did this using this translator's environment that we developed. I mean, it was something that we had to do here, because being particularly focused on the mining industry, we quickly discovered that just about every significant mining company, had a different computing environment.

Was it a high- level language development environment that you developed yourself or did you use COBOL or something similar?

We were using COBOL and a sort of a CICS type environment which we developed to operate on the Prime and a translation system. So we can basically develop it on the Prime prove it up, press the button and port it into an IBM CICS environment, or Control Data environment or whatever. We had a system software team who used to port that environment on the various platforms where we need support. It was fairly unique at that time having that capability. We thought of developing it as a product but were just too busy to do that.

What year are we now and how big is the company?

We're about? That's about 1983. The only capital we had was that each of the participants put in $10,000 at the start. We basically had to gear ourselves around being profitable from day one. Given that we had free office space, and free use of the computer to start. None of us drew a salary for the first 12 months. We basically ran pretty close to zero costs. Because of this we were able to build up the business to a point where we were essentially profitable from day one. And we were able to grow without a capital base. In fact, we had managed to run profitably and expand around Australia and over to the US and South America without raising any capital at all.

Was there a phase during your growth that you suddenly got big or grew a lot in a small time and you suddenly realised that this is serious?

Well, yeah, when we got to the point where we were competing globally with SAP and people like that, we realized we were just underfunded. And, you know, one of the things about the mining industry is it's very cyclical. You go through good times and lean times. We had to credibly compete with people like SAP so that's when we decided to go out and raise some capital. And by that stage our annual revenues were around the 100 million mark. At the time, I think we were Australia's largest software exporter and the largest developer in terms of their teams.

When did you move out to Greenslopes?

Oh, that was about 1985 I think we moved out there.

I remember visiting you there in the early 90s.

We decided we wouldn't rent the offices. I had friends in the property development business and they found a site which we could buy cheaply. We had to raise the finance and develop the site and then lease it back.

Who did you raise the finance from?

It was the Presbyterian pension fund. And I'm not sure how we got hold of them but anyway, they were looking for invest but so it was a clean deal on the basis of, okay, we go and develop the business, they lend us the money and they bought the building from us and lease it back to us.

Now you didn't know your equity?

No. In fact we probably made more money out of being a property developer than we did out of our software. But we got a building nicely developed to our requirements and at a good price and that worked very well. So within a fairly short time after just a few years of operation we'd essentially taken all the mining business in Queensland. Our original Prime machine got to the point where the mine went into production. They ended up saying that they needed more capacity. So we put in a dedicated machine for them, UTAH Development were growing at the same time and we put in a spare machine for them, upgraded it, so we ended up having three top of the range primes operating in Brisbane. We started talking to people down in Sydney. And we set up an operation and put in a machine to establish a bureau service there. Subsequently, few years later, we put one in Melbourne that was built around the petroleum industry. This is when we brought in a guy called Scott McTaggart, who developed an innovative range of products for the petroleum exploration business. That seeded a marketplace for us in the petroleum industry. We grew fairly rapidly in Australia. The obvious place next place for us to go was Perth. But at the time we'd been looking at the American marketplace because we'd been dealing with quality American mining companies out here and they were saying to us: We really wish you had an operation in the US because we'd use you ever there. We basically had a choice between opening a Perth office or going to try a US office and because of some of the benefits being offered by Austrade we worked out it was no more expensive to try our luck in the US as it was in Perth. So we said "No, we'll go to the US" and that was that.

What was the period of your major international expansion?

It started in the mid 80s. We sent one of our directors over there and gave him a budget of $500,000 to get the US going with the technical mining products. He was the guy behind developing all those. So he did that for three years. Then we brought him back and sent someone over there to pioneer the use of the mining products. We found we had a real advantage in going and talking to American mining companies. In Australia if you wanted to develop software, you hit mining pretty early down the list of industries. In the first half dozen you find mining. In the US even though the mining industry is bigger than Australia over there. You didn't hit mining until the late 20s.

You finally made the point in Ella's book that logistics had to be more sophisticated in Australia because you're more isolated whereas the US were closer to their suppliers.

Yeah, that was something we sort of recognised after we got there that our competitive systems weren't nearly as sophisticated as theirs. Because of that tyranny of distance. And that is not just in Australia, obviously, or selling into America where we had more sophisticated system competitors. But also helped us greatly, obviously, when we moved down into South America and Africa and other places with those same logistical problems.

David, a quick question. You said that instead of going to Perth you went to the US because of the support offered by Austrade. Can you maybe talk a little bit about what support Australia did offer?

There's the Export Market Development Grants. EMDG. A lot of the money we spent that we claimed back as export marketing. We sent a team for three or four went over there to all major centres in the US. Prime partnered with us and they provided us with facilities. We had a consultant who was chasing after all the mining companies. So we spent about four weeks going around talking to all the mining companies and demonstrating our products. We got a fairly warm reception from people who said, “Yeah, we'd love to see you here”. And, you know, Australia had a reputation for technology and mining so that we didn't have any constraints in terms of coming from Australia, but they basically all said, “Yeah, well we're happy to buy software from you, but you need to have a local operation with a butt we can kick if we need to” . So we basically decided to go ahead and opened our office there because it was a much bigger marketplace and the costs were ameliorated through the various support schemes from Austrade. But when we went to South America, America we gained customers from our US operation and sites down in South America. At the time, Austrade had to deal with a lot actually lending you money to start up operations overseas. So we opened an office in Chile helped by a million dollar low cost loan from Austrade. And we did the same thing in Singapore for the Asian marketplace.

I once visited that office in Santiago in about ‘97. I was taking part in a lecture tour for IBM and I thought I'd just wander around and have a look at the San Diego office.

You know, we had a little sub office up there for guests for the BHP big copper mine.

I was interested to find out then that you had a South American users conference? Just for your South American users?

Yes I had other business in South America. We ended up having user conferences in North America, South America, Africa, Asia and in Europe. And then representatives from all those conferences used to come to Australia for the major one, where we had a voting system

where based on what your telling us, this is what we're going to spend all your maintenance, dollars on this year. And everyone had a vote. Those things worked extremely well.

The evolution from the bureau service to the software company was continuing and you expanded beyond mining software into asset intensive industries such as utilities, correct?

Yeah. Well, we realised fairly early, on in fact that we got approached by people from other industries such as the Electricity Commission of New South Wales, Railways in South Australia, that the definition of our software was for a mining system, but actually it was really aimed at organizations whose business revolved around opening and operating lots of capital equipment, both mobile and fixed, or both. So we knew there was a good market for our system, which was at the time being developed as an integrated system, an enterprise system. Most computer systems at that time were directed to one particular part of the organization's requirements, you have a finance system or a supply system or a maintenance system and they didn't talk to each other. You had to facilitate that, they were all these stovepipe systems. But our system being designed from the start, at Comalco, as an integrated system. It was designed to encompass all the requirements of an integrated system covering all the basic requirements for running that business. And so, yeah, it was after a few years we realised that that system could operate equally well out of the mining environment and in various sorts of utilities like railways and later on in defence. We signed up a couple of railways in Australia. The few electricity customers we had the New South Wales Electricity Commission, they adopted our system, so it operated there. And when we went to America, we got talking to Union Pacific railways who also liked the system and adopted it. We ended up being a being in a position where we're talking to one of the other big mining companies Marathon, not Marathon, ah, a Canadian mining company they were now using our system in Indonesia and Australia, and they wanted to adopt it globally. And they spoke to Gartner, yeah, they used Gartner and they said we want to adopt this Mincom system globally, can you give us some confidence in doing that? And they said “Who are these people? We've never heard of them”. The mining company said, well, you should talk to them, they're pretty significant in mining. And so, they paid for Gartner to come out and visit us. And the Gartner guy told us we'd been very naive, if we want to be successful in that sort of global environment, we needed to have a relationship with Gartner, which we soon realised was quite sensible. So, we spent some time with Gartner and we persuaded them to establish a better MRP software environment which essentially covered manufacturing and other things. And we persuaded them to establish one for Enterprise Resource Management. The ERM focus, and they rated us and put ourselves and SAP as the two leading lights of that globally. That generated quite a lot of business for us. So it was a useful exercise.

You mentioned railways earlier. David, wasn't there an issue that Queensland railways wouldn't adopt your system and went with SAP?

Yep. Well, but they had adopted our systems, but they had the Ipswich workshop doing repair work on bits of equipment. They said, we're actually a manufacturer, we need an MRP system to run the Ipswich workshop. We said, well, we didn't think that was a critical problem. They certainly didn't need a manufacturing system to run that operation. But they decided they did because they wanted to buy SAP. And we found this: to bureaucrats wanting to hone their skills, the idea of being a SAP consultant was quite attractive. The idea of buying SAP so they could work SAP was quite attractive to them.

Was there a whole government SAP movement in in Queensland?

There was going on. I actually went and had a big complaint to Goss who was the Premier at the time about this and he was sympathetic, but said that he couldn't do anything about it because they were trying to position the railways as a profit centre so he wouldn't and couldn't intervene. We found quite a few problems with Australian business wanting to buy offshore rather than locally even though we can convincingly say that well, we're the leader globally in mining or whatever. They liked the idea of swanning overseas.

So why do you think that was the reason? Was it any sort of inferiority complex?

There was a bit of that. The cultural cringe thing. People, and certainly people dealing in Queensland, were reluctant to accept the fact that a local company could be global leader in this business. I talked to other companies and found that becoming very successful in the US was the best way of getting acceptance in Australia. Yeah, we thought we couldn't do it on pure logic. Talking to a local railway, if the Union Pacific Railway and the Burlington Northern Railway being the two biggest companies in the US used our software, they could hardly claim they couldn't use it.

We're into the 90's now. When did you move to that fortress in Teneriffe?

Oh, that was late 90s, we basically ran out of space and we sold it off. We'd actually bought the building. I forget what happened, but the landlord was short on funds and was looking to sell real estate. This was the Presbyterian Church and we offered to buy the building. We were able to get finance and buy it and actually reduce our rental costs. So it was it was a good deal.

It's a pretty big company by this time, what were revenues and staff numbers.

Oh, well. We would have been about five or six hundred globally. We had three hundred or so in Brisbane with a number of separate offices. So moving to Teneriffe was to really bring everyone back together again. And our revenues at the stage were around the 100 million mark. We never showed too much profit because as soon as we had had cash, we spent it on development or global expansion and things like that.

And about that time you received an investment from Caterpillar, wasn't it?

Yeah, well, we got investment from Caterpillar and just before that from Colonial Mutual in Australia. I had a venture capital fund and we got a modest investment from them. Not a brilliant deal.

No, you mentioned in the book a conflict of interest with Caterpillar.

Yeah, yeah, there was there was in the sense that you know, that they were interested in integrating our software so that Caterpillar machinery could communicate directly with our maintenance management systems. And we did all that. But, I mean they were more interested in selling trucks than they were in getting people to use the software. So there wasn't there wasn't a natural interest in the software. We developed a mine planning system with funding coming from them. It wasn't a perfect partnership because we hadn't worked out in detail how both companies aims would be best fulfilled through the partnership. But, it worked pretty well and we developed this system called Link 1. We developed that with help from Union Pacific Railways. We wanted a system to enable their guys going out around the tracks inspecting equipment to be able to identify parts and, and so forth. So we developed a graphics passbook system so that they can point and click and get the part numbers and get

orders through the head office by getting stuff sent out. And we turned that into a product called Link 1. And we got a lot of the mining companies who really liked the system, got them together to put pressure on some of the equipment suppliers like Caterpillar and Komatsu to publish all information in Link 1 format. We were successful at that. That's how we got talking to Caterpillar. Komatsu actually went further and adopted Link 1 as their system for providing parts information and management of ordering for all of their equipment. We set up a separate business unit to look at that. There were a number of touchpoints with Caterpillar which persuaded them to invest and get involved.

What? How much equity did they take in the company?
Oh, they put in about, I think it was over 10 million for about 8 or 9%.

And about this time late 90s you're getting a tech boom. When did you start to consider listing on NASDAQ?
Well, the latter part of the 90s. I spent a bit of time going around the US talking to Goldman Sachs and Morgan Stanley and all the major investment banks and they were very encouraging. With hindsight though I'm sorry I followed their advice. But they said the thing to focus on was rapid growth. Forget about profit. Just get the growth that will facilitate your IPO. But we ran into a hurdle with the Y2K with everyone running around hyperventilating about how the world's going to stop. It had the perverse impact the organization's spent all their focus on ensuring all existing systems weren't going to fall apart at Y2K, and so it became extremely difficult to get any of the focus on upgrading systems or putting in new systems.

Only shortly after that the tech crash occurred.
Yes, it did. We thought when Y2K finished that people would come back. But what happened immediately after that is that all the big organizations were being told "What's your Internet strategy? If you haven't got an Internet strategy, you are in deep shit". And so everyone we spoke to them just after Y2K, they were saying "Tell us how you solve our Internet problem because we're not buying a system unless it solved our Internet problem". So, you know, that over that whole period it got fairly tight in terms of selling systems.

When did the sale to the private equity people happen? The name again?
Oh, Francisco.

Yeah, that's right. When did that happen?
That happened when I was still pushing for an IPO, and we were still moving towards that but they came along and made an offer which all shareholders decided was a good idea. I thought we could do better through an IPO, but I went along with the majority view. In my mind that was that was consummated, I think, it was 2007.

Did that change things?
I mean, it certainly changed things in terms that when we sold the company was still it was 75% owned by employees and everyone sold, so it became totally owned by Francisco Partners. Part of the deal was a promise to provide up to a billion dollars of extra funding for us to expand globally. But then when the GFC hit they decided they couldn't do that anymore. It didn't turn out as it was supposed to work on the basis, they would essentially provide the capital to expand and to perhaps underpin an IPO. But they were badly affected by the GFC

and ended up selling it to ABB. And then subsequently was sold on. I think Hitachi owns it now.

Oh, really. did ABB sell to Hitachi, I didn't realize that. When did you get out of it David? When did you retire?
I basically pulled the plug in 2000. I had some personal issues with diabetes. I had a son who needed me at home. I had gotten to the point where I couldn't spend the time needed to run the show. So I decided I would find someone else. And we looked around. Initially we used some agents and we got a guy from the US to come in, he turned out to be a disaster.

I remember that.
Yeah. So he lasted for about 18 months and we sacked him and appointed Allan McCrae to take over.

I forgot the guy's name, but I do remember that period.
Frank Berger was his name.

So a lot of interesting stuff. A lot of innovation, one of our themes of our interviews
Before we go there, David, what else did you do since 2000? When you left the company? Did you become involved in any startups or in any other bits of the IT industry?
I got involved in a number of software companies after I stepped down as CEO, before Mincom was sold. I took on a number of roles on boards of IT companies, both in Brisbane and outside Brisbane. One company called Encom, which had been started by a guy who'd worked for us for a while at Mincom. Encom was a geophysical software company, based in Sydney. They asked me to come in and chair that which I did.

I was chairing another company involved in legal library systems, also based in Sydney. They later moved up to the Byron Bay. I chaired that company as well. They had an investment from Deutsche Bank's fund, so they asked me to come in chair that. I was on the board of a number of Queensland software companies. A company called SoftLink who were involved in library software. I also got involved in another company called Lightbytes Entertainment. They were involved in doing animation systems for TV. So I got involved quite in seven or eight board positions of various companies and I stayed on the Mincom board as well over that period. I kept very busy on that sort of board level stuff. I didn't have funds to invest but then, when Mincom sold, I invested in a number of companies as well. And I'm still doing that. I'm still actively involved in half a dozen IT companies, mainly small start-up companies.

And what attracts you to start-up companies? I mean, what we heard from the interview so far is that Australia really has (as you say in your book chapter), that there is no capital really available for start-ups in Australia. You are one of the few people who invest in start-up companies. What motivates you and how do you select a company to invest in?
Well, I need to say I'm probably not a good person to ask because most of my investments have proved very bad. I'm too easily persuaded that something's a good idea. So I can't claim at this stage a huge amount of profit for any of my investments in IT yet. There's some still going. I'm hopeful that one or two will pay off in the in the long run.

What do you look for in a start-up? What do you look for when you invest?

Oh, well, are you looking for a number of things. The market- there's a real need for the product? There's capacity, both in terms of the disciplines to develop products over a long period of time, and the business skills to handle the marketing and customer management sides of things. So, looking for a company that has the capacity to develop into something that can sustain itself. It's very hard to make those judgments. A number of investments I made, not by myself: I work with other people. As you might have heard of a company called BHA. They were a big competitor of ours, run by a guy called John Henry. At one stage John and I spent some time talking about when we merge because at that time we had all sorts of companies coming up spending one day with Mincom and one day with BHA. He developed software for Colonial Sugar Refining initially and he developed software for managing their operations very similar to what we developed for the mining industry and we're competing. We looked at a merger but decided against it. He sold his company to an American firm and, and he and I actually worked together in doing joint investments in a number of Queensland companies. Some of those some looked extremely good, but for various reasons didn't work.

You had a section on innovation in the book. Innovation is of particular interest to us in this study. What do you think is the most innovative thing that you ever did in terms of a product or systems or methodology?

I think, developing a large scale, (one of the first of the few) fully integrated enterprise business systems, developing that at a time when that wasn't really recognized as being a path. I think that was fairly innovative, be able to do that and being able to manage the problem of developing that for a global customer or computer environment was pretty innovative at the time. We were the only people in the world who had that sort of capability. In the US, and most of our competitor marketplaces, companies would develop around particular hardware environment because there's a big enough marketplace to do that. When we started in Australia, we had to develop, so we could operate over ubiquitous hardware platforms. So that was fairly innovative.

What motivated you to have an integrated system when everybody else installed I think you called it stove pipes?

As I said, we employed Alan McCrae, and then subsequently other people. They had been convinced, they'd been involved with work for Coopers Lybrand, as consultants. And been engaged to work at Weipa, with my friend who was running the Weipa environment. He'd become convinced that integrated systems were a much better solution to the problem than by whole series of stovepipe systems, which you then had to tie together in a business sense. We weren't the only people doing that. I think SAP was certainly preaching that sort of architecture at the time. And we saw that as being a competitive advantage. We had a system that been designed around those principles from Weipa. So we became proselytizers for that particular architecture. And I've no doubt that it was part of our success.

We're able to talk to organizations about that because you can provide a much better solution to problems and provide an integrated business system perspective from the discipline of stovepipes for finance or human resources or whatever. We had quite a lot of innovation built into our technical mining products as well, because at the time we were set up. 1979, was the Iran revolution, which affected the oil industry badly and created a lot of interest in coal. A lot of our early work was because the development of the Bowen Basin was based around modelling coal deposits. Most mine modeling systems which at that stage, were based around

mineral deposits with block modeling. You just divided up the three- dimensional space into blocks in your model, blocks within blocks. We approached from a seam or surface modelling approach, which is far more sensible for coal which is a seam-based deposit. We pioneered that sort of technical architecture for mine planning and deposit modelling globally. That helped our appeal against our competitors because we felt, as we believe we were, a far more efficient system for modeling seam deposits.

And graphics?

Our graphic passbook system was you know, at the time, one of the first of its kind that was quite innovative and but certainly it attracted a lot of interest and, and improved our systems substantially too, I think.

Now, you mentioned earlier about the help from Austrade and the Export Development grants. I think governments generally in Australia have done enough to encourage innovation in IT. A lot of people are of the opinion that that's not the case. You said governments were quite useful when you were expanding.

Sure we, we found them quite useful, though, the Export Market Development grants, it's not a very significant thing. There's a maximum of $50,000 you can claim on that. But that's particularly for a small organization that helps them defray the costs of overseas marketing. That's certainly a useful scheme. We used that extensively. As I said, we found Austrade around the world. When we were moving into an area they was very helpful in linking us up with local business. The low-cost loan scheme was very useful to us in expanding our office infrastructure in South America and in Southeast Asia. We didn't we didn't expect them to solve our problems for us, but certainly, they could be quite helpful.

For start-ups today, in Australia, do you think the investment environment, or the government regulatory environment is sufficient or could it be improved?

Look, I haven't been sort of closely involved, of late on many of issues, but yeah, I'm sure it could be improved. I had contact with two Trade ministers while I was there during my Mincom time. One was John Button. He and I went on the first post-apartheid trip that they organised after apartheid had ended. I joined his trip to go to South Africa because we were studying to expand our operations there. He was very useful and subsequently, you know, when we opened an office in Singapore. He was actually in Indonesia at the time. He said "I'll come up there and open the office for you, if you like". He saw me and just came on up. He was very helpful. A really good guy. And then next, the National Party's Tim Fisher. He came along to open an office we opened up in Thailand when we won the contract to computerise the electricity industry in Thailand. He was there and he was very helpful. Quite often he'd ring me up and say "Look, I've had I had lunch with so and so and I thought your products would be useful to him and he's expecting a call from you". So the politicians I found, particularly those two were really helpful. And they, you know, they helped our cause.

We won't keep you much longer David, but we just had to go through a couple of bullet points on how significant you think some of these different factors are in the development of innovation in Australia. I'll let Sebastian asked these questions because it's his list.

Right.

Looking back over your whole career in the IT industry, what role do you think you played in education and training access. Access to people that are trained, or the graduates that are produced by our institutions in Australia.

Yeah. Well, a lot of people ask me, you know, when we became quite big in Australia and in global terms "Why are you still based in Brisbane?" I explained to people well, we thought the fact that we came from Brisbane, in fact has been highly useful to us. It had very good educational institutions there. And being a smaller state, it didn't have the head offices or the federal government departments and things where you had to suck up to people all the time.
Yeah, so we found that we were able to access a lot of the smartest people coming out of university because they were there. That was for people who want to stay in Queensland. It wasn't a terribly competitive environment. So that's certainly helped us and certainly part of our part of our success was based on the fact we did go out and hire lots of smart young computer science graduates from UQ and from QUT as well.

I grew up in an environment where there's no such thing as a computer scientist, science degree. I did my electrical engineering and just learnt a little about computers through that. I did an economics degree part time, just for fun. So I learnt my IT on the job.

Certainly, the getting of those highly skilled systems programmers from the universities was very important to us in our development. And I think that the point I made, I think in that John Miller book was that overseas probably the best the brightest it graduates tempted to go into a system software area working for the computer manufacturers, people like that. In Australia, they weren't those sorts of jobs about. So the smartest people tend to go to application development, which is why we were very strong in that area.

What do you believe? Is the role of personal traits, aspects just such as perseverance, personal networks, and leadership skills in driving innovation? You grew from a very small company to a big international so do you think your personal traits played a role in that?

Yes, I do. I think one of one of the things which I've talked about, is the fact that I've always been fairly committed from the start. I wanted a high level of staff participation in the business and that that sort of cultural thing tends to attract the right people who wanted to work in that sort of environment. It evolved, as you know, that was a very important part of our culture and our success. My biggest job was encouraging people not to burn themselves out, rather than to work a bit harder. We tend to have very low levels of costs in terms of systems to check up on what people were doing. Because everyone was highly motivated, and driven by the success of the organization: because they felt a part of it. I think that was a significant part of our success, the fact that we had a huge buy in and people just loved working for Mincom and participating in it.

We talked about government initiatives, funding policies and so on. Anything that you want to add that we haven't talked about.

Well, I think that obviously that the systems to encourage and enable staff ownership, options schemes and things like that they've been important. There are cases where parts of those rules which are a bit deficient, one is that a company which has been going for more than 10 years, you can't get the same sort of benefits from options as you can as a start-up. I think it's a mistake, to say, well, you have 10 years to grow using that, that mechanism. Even mature companies need those sorts of continuing systems in place.

And you talked a bit about the role of that proximity to the mining industry in Australia is giving you an advantage. I just looked here through 1500 pages of the how "computing changed businesses". It's very US centric and there is no mentioning of mining whatsoever. And it's all kinds of industries. So what role does infrastructure and in this case, access to your supply networks and to your customers play in driving innovations?

The first thing is that if you look at mining in Australia I mean, most industries in Australia tend to be derivative. They look to follow or imitate innovations that have been done elsewhere. In Australian mining companies, they see themselves as being leaders and they prefer to invest in innovation. So it's one area, and probably agriculture's another one, where Australian organizations are prepared to invest in innovation. Now, individuals, they've got a mind to get involved in innovation. If you've got a customer base, which is only interested in seeing what worked overseas and copying that it's hard to get them investing in innovation. That was for us, not in the context of the mining industry.

But you said that with the railways it was the opposite. Do you think the railway industry in the US saw itself as an innovation leader? And that got you in the door there and in Queensland?

Certainly. Most of the innovations inside say rail area happened either from three sources. One was the US, Union Pacific railways in particular, we had a very good relationship with them. We ended up providing all the systems for British Royal for the Hong Kong Metro, so that all those organizations saw themselves as being market leaders around the world and were interested in innovation. They would encourage us to innovate and fund it. For most of our history we were a small company without a large amount of capital. Most of our development came from us convincing organisations that innovation was a good idea and them funding it. So we didn't do huge amounts of development on our own bat but we usually organised to have some customers funded and help us make sure it was fit for purpose for the industry.

And what role David, do you think that serendipity, chance or just pure good luck play in innovation?

Well, a huge amount. If you're the right type of business in the right place and you run into the right people, things can happen terribly easily. Now, in another set of circumstances, you could thrash your way and get nowhere for a long period of time. So yeah, there's an element of serendipity about the success. But unless you are motivated to get out and look for those opportunities, and try and encourage, and to think through it to the point where someone will say "Yes, I'll put some dollars on the table to underwrite that". It's difficult to make it happen.

The harder you work, the luckier you get.

Well, yeah, and also one of the things we worked out fairly early on, because we would work very closely with our customers and stuff. But the idea that a couple of IT guys say, gee, that's a good idea. Let's go do that. Now, that may well be true in the system software perspective, that you think through innovations. But from an application viewpoint, you're far more likely to succeed if you work with someone who's got the real problem, and can make you aware of the constraints and the complications and so forth. So we tend to do most of our innovation where we come up with the original idea, but we'll involve customers to funding it and helping us to think through and make sure we get it right. A lot of our innovations came from customers coming to us with a specific problem saying can you solve this? One thing we realised fairly early on was that we shouldn't rush in and just solve that customer's

problem. What we should do is make sure we go and talk to other customers, see where there's a general problem and make sure we solve the general problem rather than specific one. Because often you can get carried away and just go solve a very narrow problem and miss out on the bigger picture. Yeah, solve a problem for all industry.

Correct.

And what about professional bodies standards? What role does that play for you?

It did play a bit of a role, I guess, particularly in the mining industry. Because in our early days where we'd have companies come to us and let's say, "Well, we liked some of what you do, but we did things a bit differently". a lot of that conversation was about, okay, how can we change our system to make it look like what they do. As we became more generic and powerful enough, particularly in the mining industry, we got out of the position of mining companies coming to us and say, "Well, we like your system. But we think you need to work differently in this area and do things this way". We'd say "Well, the way we do it covers IBM CRA, Rio Tinto, rattle off a list of the eight largest mining companies in the world (list all the requirements), why are you different?" So we found that most of the companies had to come to us and say we want to move to world's best practice, we believe that can you help us to get there. And one of the impacts that happened was that our business changed, the revenue base changed dramatically from being mainly software development and then to consulting services. For every dollar we got from selling a software licence, we get $4 from Consulting Services, helping them with training implementing and so forth. So one of the signs of success in the software industry, you you've got to make a decision early on whether what you're going to do is develop the software and rely on other parties to implement it, which is what essentially SAP did. They developed a software development environment where organizations could tailor their base system to their particular requirements. They engaged all the major consulting organizations in building software development teams to implement SAP for particular customers. So SAP concentrated on developing the generic stuff and the language environments to develop specific software for their customers. We came in with a different approach saying, okay, only we are going to only tackle Enterprise Asset Management organisations, and we're going to provide the full solution. So it's going to be lots cheaper to put it in, because you don't have to go develop software specifically for your requirements and we'll provide you with all the services that you'd otherwise buy from Arthur Anderson's or Price Waterhouse and so forth. Of the different approaches, one is more industry specific. We went down that industry specific path.

Looked at generically, SAP certainly has done a lot better than us in terms of utilizing the consulting organisations to sell their technology. But that wasn't the path we went down. We focused on delivering a total solution. When we went into the defence area, for example, we ended up with 30 senior military guys working for us as consultants. Probably tailoring our systems validates the military organisations.

Are there any specific aspects to the Australian environment other than what you have mentioned so far?

Yes. Well, I think I've covered the highlights I wanted. There's still a bit of a cultural cringe around. I think we're probably getting better at that. But it is a problem which Australian companies have to deal with. We should tend not to buy offshore as much. Against that, I think increasingly we are finding there's more appetite for innovation in Australia than there was earlier. We're certainly are well, serviced by our academic institutions, which churn out very high quality and highly skilled people. I think that there's probably room for more

collaboration between academia, the business organisations and software development organisations in terms of solving problems. The government has tried to do more about that in terms of the CRC for example and are a great idea. And some of them work pretty well.

Cooperative Research Centres?

Yeah, that's right. We work with a number of those. I thought they are very useful organizations to get innovation happening. And I think you know, this is the way of reviving that whole battle, I think. Yeah.

We've just had you a good bit longer than many others. Thanks for your fabulous reminiscences and ideas. We don't know if we'll keep it this way, that way. We've been ending on a high note, David. What's your biggest disappointment? biggest disappointment in career with the industry?

Oh, well, my biggest disappointment, I think is the fact that I didn't manage to get Mincom to a position where it had an independent process to continue. I think it was a great pity we didn't get to an IPO where Mincom could have continued on as an independent organization. And I think that's my biggest regret. I could have put more focus on getting there. We had all sorts of rational reasons why we thought we should go for listing on NASDAQ, but I would have been much better off going for a listing in Australia and then switching over or going for dual listing on NASDAQ as well. So that was that's, that's my biggest regret.

Can you advise today's start-ups on how to approach this? Trying to seek capital in Australia.

Oh, well, I mean, it's you know, the reality is it's much easier now. Because there is a proper industry there now. When we started out there literally was no other option than going and talking to your bank. There was nobody who brought in capital, the banks were the only ones doing that.

Advice. You had real estate, advise them to go to the Presbyterian pension fund, would you?

If they got a real estate problem, yes, that could work. So yeah, there's also the fact that now the industry is far more globalized. You're not restricted to raise your own capital in Australia. There's much more of a global marketplace, which I think is hope that helps things. It's a very different environment from what we faced.

That's great. Let's call it to a halt. We've been more than 90 minutes. So, thanks so much for your time.

End