



Tim Johnson

Interviewed by

Richard Sharpe

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Via Zoom

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Archives of IT

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Welcome to the Archives of Information Technology where we capture the past and inspire the future. It is Friday, 27th January 2023. I'm Richard Sharpe and I've been covering, researching, delving into, interviewing about the IT sector starting in computing since the mid-1970s. And we are going to put on record today the second part of the contribution to the Archives of Tim Johnson. Tim went through some of his history earlier on, but we've got more to say, and more to say as well about his father. Just to recap what Tim's position was and is, he was born in 1942 in Derby, because his father was working for Rolls-Royce during the war. Rolls-Royce, the great aero engine manufacturer and designer and the manufacturer and designer of the Merlin engine which went into the Spitfire, the Hurricane, the Mosquito, the Lancaster and various other important Second World War ones. And his father as well carried on working at Rolls-Royce, and carried on into the jet age, and in the early 1950s things were really beginning to hot up. By 1951 we had in this country the first commercial use of computers with the Lyons Electronic Office, LEO, out in west London in Cadby Hall, running payrolls and stock control for their very, very progressive company. Flowcharting used to design it, etc. Wang Laboratories had been formed in the USA, Whirlwind, a computer, was being built by IBM for the early warning system in the USA, and transistors from 1952 were militarising things. Autocode was devised for the Manchester Mark 1, and in '53 IBM woke up and introduced a 701 digital computer, and Tom Kilburn devised floating point hardware.

Rolls Royce

Tim's father was a hydraulics engineer at Rolls Royce. Tim says: "My father spent all his working life at Rolls-Royce and he was obviously restricted in what he could talk about and it was only a few years after that one learned that he'd been working on very interesting things. For example, he worked on the Blue Streak rocket. He had to be taken off the Blue Streak rocket because it turned out that he'd had connections in Cambridge who the Americans would have been suspicious of, thirty years later, in the early sixties. So he went to work on a slightly hair-brained idea of vertical take-off. As it turned out, that was probably quite a good thing, because Blue Streak was cancelled in about six months, and the vertical take-off turned into the jump jet which I think, was largely done by hydraulics, not by electronics at all. He made quite a considerable contribution to the successful workings of that engine and that vertical take-off."

In 1953, Tim's father was commissioned by the company to write a report looking at whether they could use a 'computer' (this was the spelling used in that report). The company wanted to examine whether it a computer could be used in a design office to design turbine blades. Tim adds: "The exact design of those blades was vital because the blade needed to be as light and strong as possible, and the exact shape was important because it had to be shape that would move the air as fast as possible. They were all solvable problems, mathematically, but it was an awful lot of work to do it.

"He told me later that the whole project was based on whether a computer could do Fourier transforms at least as fast as three engineers with slide rules. In fact not only could it do that, but it could also do Laplace transforms and was a way of summarising why the whole business case proved worthwhile."

As well as proving the business case for purchasing a computer, including savings, growth potential and 90% efficiency improvement, the report also looked at the potential impact on Rolls Royce's internal politics from how it would be received by engineers, the accountancy department etc. Tim adds: "You can see him picking his way through the politics of it all to come to the conclusion that it can be good for everybody. It also shows what a democratic company Rolls-Royce was, it certainly wasn't a place where the boss said we're going to do this, and everybody goes and does that. It was definitely a place where different parties could each make their case and negotiate."

The report also looks at computer suppliers with options between renting an IBM machine (a 602A made and supported in the UK) and Vickers Powers-Samas, made and supported in France.

The project was successfully implemented following the report and Rolls Royce became one of the pioneers in early computing in aerospace. Tim says: "Although my father played a key role in that, and his understanding of the politics was quite an important part of it, computers didn't suit him. He didn't like that kind of thing, he liked hydraulics and something he could feel and see and push around."

Telecoms resistance to technological advances

Having produced reports on fax machines and packet switching technologies, Tims says that there were some interesting attitudes from the telecommunications to the new technologies.

On fax machines, he says: “BT saw it as a nuisance it locks up the telephone line for a long time, there’s lots of Erlangs in it, it jams up the exchanges. There was general reluctance to expedite new technology by the established telecoms companies. ... Across the whole of Europe there was definitely an attitude that it works this way, we understand this way, people coming along with new-fangled digital ideas and whatnot and they’re going to tip over the apple cart, we ought to try and stick with what we know. It was quite repressive.”

On packet switching and PTTs, he says: “The resistance in America was a rather different kind, because the Bell companies were all very jealous of their territory, all very jealous of their rights to carry communications, determined to block other enterprises from investing in this area and providing rival services and so on. So the causes of the conservatism, the roots were probably the same, but the apparent causes were different. The telcos were dragging their feet about the whole thing and instead of what might have been an opportunity to become the leading big technology companies that we see today, they completely lost out on it.”

Book

In 1971, Tim wrote *Network Communities: the Computer in our Lives*, published by Weidenfeld & Nicholson. It systematically looked at the applications of online computing.

Point Topic

In 1998, Tim, with the backing of two colleagues he had met while working at Logica, founded Point Topic. He explains: “Geoff Eagland and George Kessler, were part of the David Sayers Management Consultancy team in Logica. They were quite an eclectic set of people. There was an attractive tax scheme for backing new

companies at the time, and they had some spare money, so they backed me, which was essential.

“In 1998 broadband was clearly getting going and was going to be vital. Geoff and George could see the story, they had a similar background to me, and we started out by basically collecting statistics, more definitive statistics than other people managed, because we were spending more time on it with more expertise. It really grew from that.

“We had a tariff service, looking at what the tariffs were for all the broadband suppliers across the world after a few years, and data was used very extensively in cases about should this be as cheap as possible or should it be more expensive. So that built up to a well-known international service. Then we had to move on to more broader things, because obviously that became a pretty routine piece of information after a few years.

“It was a one-man band initially, but I quickly had people helping me, including John Bosnell, Leila Hackett, and then my son Oliver Johnson, who started around 2004. We built up to about ten people by the time of the financial crash.” The crash impacted the company’s subscribers, Tim continues: “We had several people drop their subscriptions and so on and they were big chunky subscriptions and so we just had to cut back quite severely. But we survived and it’s now running as a profitable company and providing mapping, broadband mapping services.”

Tim says that Point Topic made an important step in 2005 when it switched its focus from “producing international statistics, which is a market, to actually mapping broadband coverage.” He adds: “The idea was that we should actually go down to postcode level and be able to take a database of 1.7 million postcodes and allocate broadband, use various different sources of information, like speed tests and coverage maps and all these things, add them together and really start saying, at the postcode level, who was offering broadband, what was the choice, what was the take-up, and producing these massive maps.

“We’ve been doing it now for 18 years or so. The idea is to apply it across Europe as a whole, because while there are excellent take-up maps done by the PTTs, the dominant carriers, government sponsored, etc, in those countries, they don’t go into the detail that Point Topic provides in the UK. So that was the second turn in Point Topic’s career. By that time Oliver was in charge, I’m still a director but my role is minimal, he’s got a colleague called Jolanta Stanke, who’s a very important part of the team. The team is growing and now, and the aim is to spread the Expert Intelligence project across Europe.

“We produced something called the European Kilometre Grid (EKG), which was mapping broadband take-up in kilometre hexagons, because you have to make them fit onto a spherical world. So there has been that level for some time and Point Topic’s been working since 2011 on providing the basic mapping to the European Commission of take-up of NUTS3 levels, essential stuff.”

Roll out of UK broadband

Asked if the roll out of broadband in the UK was efficient, Tim says: “You could grumble about it of course, nothing’s perfect, but I don’t think the fact that there weren’t these flagship very high speed services held the economy back in a real way.”

On the subject of cable, Tim adds: “You could say that the American investors generously bought us a fairly comprehensive high-speed cable network. I’ve never looked at it in depth financially, but it’s not clear to me if they’ve ever got their money back or not.”

AI

Asked about the potential negative impact of artificial intelligence (AI), Tim says, he is not worried about it exactly because it’s artificial. He adds: “What the people miss is live intelligence. AIs don’t have motivation. They don’t know what they’re doing, they don’t know why they’re doing it. But every living thing, even a single-celled amoeba has a really powerful motivation all the time, they have to stay alive. So I don’t believe in the idea that an AI would somehow supersede us. What it may do is plug into our brains. The brain interface to AI could obviously be very powerful. But

they are subordinate to living things and we're the top of the pyramid as far as living things are concerned."